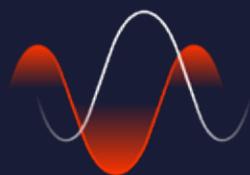
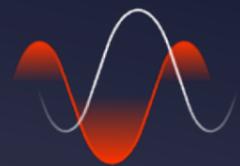


NEXUS INSIGHT



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# A POWERFUL NEW REPORTING TOOL FOR LIFE SCIENCES

Nexus Insight is a bespoke reporting tool for life sciences. It has been built within the community to simplify, save time, and make data comparison effortless, all within Vicon's leading motion capture ecosystem.

## CLARITY, ADAPTABILITY AND ACCESSIBILITY FOR BIOMECHANICS AND RESEARCH

Nexus Insight allows you to tailor your reports to the information that you need. Whether researchers choose our automated tools or create their own templates, Nexus Insight makes it easier to interpret, share and compare data, even if it is across multiple subjects or over long operation times.

Nexus Insight empowers biomechanical researchers and educators to take control of their data. Through a local installer, users can present their data without internet access for a secure and new way to report.



### BIOMECHANICS AND RESEARCH

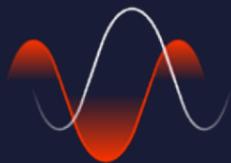
- Gait analysis
- Rehabilitation
- University teaching labs
- Biomedical engineers
- Prosthetic engineers

# FOCUSED DATA PRESENTATION

Nexus Insight allows biomechanists to take their high-quality Vicon data and turn it into clear, accessible reports.

Accurately report high-speed data collection in sports or education settings, turning your data from detailed disciplines into user-friendly graphs, layouts and videos. Effectively compare and contrast your data over time for better visualized athlete development or return-to-play parameters.

Nexus Insight reflects the diversity of the biomechanics world, with individualized reporting for different data capture settings such as outdoor spaces, large performance labs, commercial research, and more.



POWERED BY  
**MOVESHelf**

Vicon has partnered with Moveshelf to develop Vicon's powerful new reporting tool, Nexus Insight. By combining the tried and tested technology that powers the Moveshelf Information System and Vicon's market-leading life sciences expertise and ecosystem, Nexus Insight brings you efficient, intuitive reporting.



## RESEARCH AND PRACTICE

- Academic research
- Performance analysts
- Athletic trainers
- Strength & conditioning coaches
- Return-to-play analysis
- Commercial research

# EFFICIENT, INTUITIVE REPORTING

## SIMPLIFY YOUR REPORTING

Nexus Insight simplifies the reporting process with intuitive tools, clean presentation and highly customizable outputs.



Graph data directly from Nexus

- Visualize model outputs from Nexus C3D files to display angles, forces, marker trajectories, and more
- Import reference data from XLS files



Create custom-made reporting templates or use our existing examples

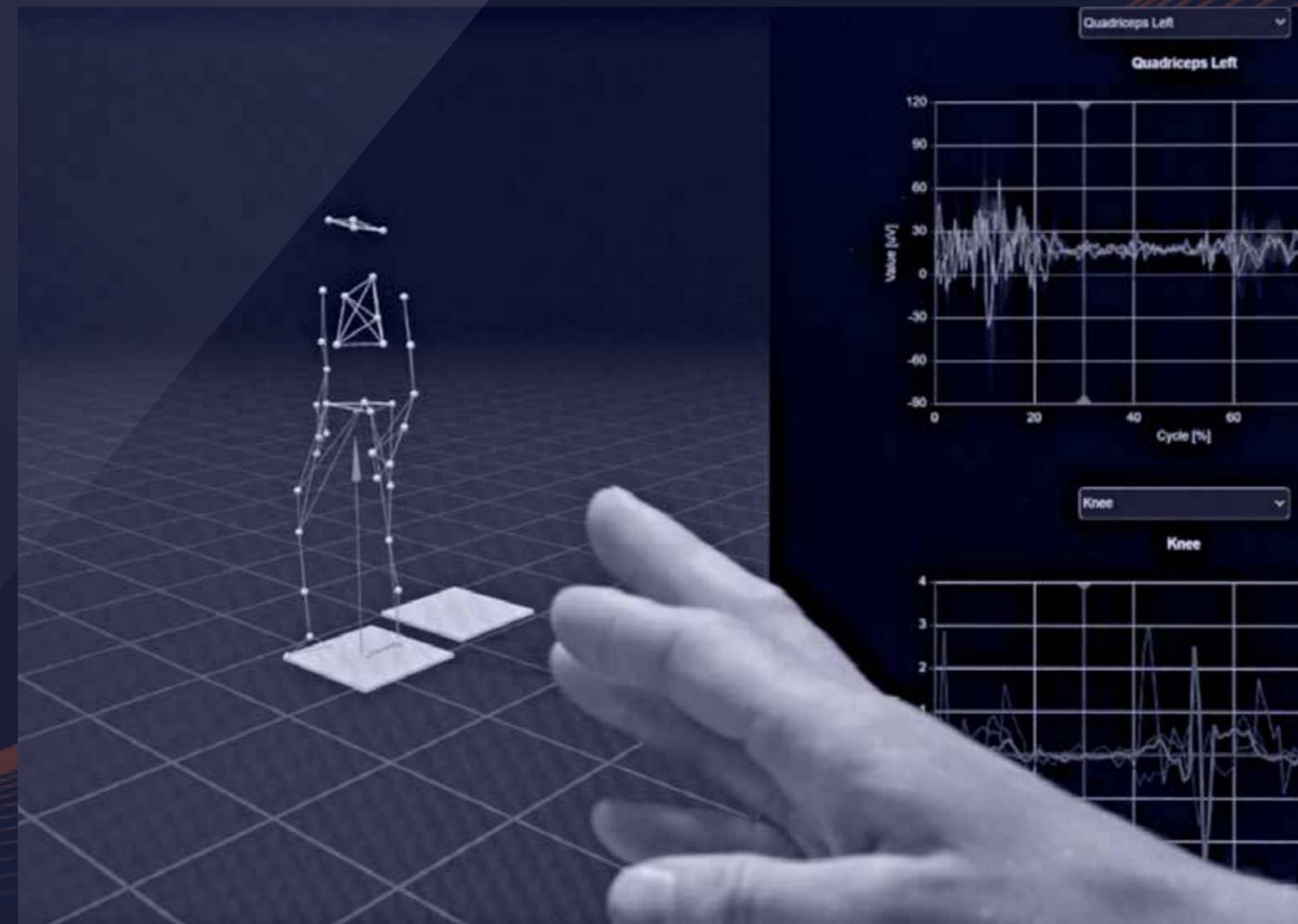


Switch to a customizable, quadrant-based layout with 3D, videos & chart components

- Overlay the average and standard deviation of multiple trials loaded into a report as a group
- Example templates are available for gait, baseball, and functional movement side-cutting



Import and compare reference data



## SAVE TIME FOR THE WORK THAT MATTERS MOST

Complex projects need tools that can support and manage high quantities of data. Nexus Insight saves you time so that you can focus on interpreting results with your subjects, and less time processing the data.

- Save and load templates to a dedicated folder in the Nexus installation location, and only to that folder
- Visualize parameters stored in a C3D file generated by Nexus as a text table

## SECURE YOUR DATA

Nexus Insight gives you peace of mind knowing your sensitive data is secure with offline data access and storage.

- Export reports to word documents for charting and editing
- Store reports and data locally
- Optional subscription with Moveshelf to support collaboration with remote teams and cases where remote data sharing is required, with a secure connection from Nexus Insight

# PART OF THE BEST-IN-CLASS VICON ECOSYSTEM



**INERTIAL**  
BLUE TRIDENT

**OPTICAL ECOSYSTEM**

- VICON NEXUS collection & processing
- VICON PROCALC modeling & calculation
- NEXUS INSIGHT reporting & presenting
- VICON CONTROL APP

**INERTIAL ECOSYSTEM**  
CAPTURE.U APP overlays real-time data

CGM (PLUG-IN-GAIT) Conventional Gait Model

CGM2

BIOMECHANICS WORKFLOW (SCoRE and SARA)

UPPER LIMB MODEL

CREATE YOUR OWN MODEL



All Vicon **MODEL DETAILS** are available for anyone to adapt

If there's a new device or program, we can provide what the

## RESEARCHER NEEDS

SDKs, APIs and open access are available for third party plugins to our software

## INTEGRATE

third party devices into your lab

**OUTPUT**  
Vicon ecosystem fits into the life sciences workflow

## MOST FLEXIBLE

range of modelling languages

Nexus integrates with the most common software, including: MATLAB, Python, OpenSim, Visual3D, LabView, or use our own free built-in system, ProCalc

**PROCALC** has features designed specifically for life sciences: visual biomechanical modelling, results shown in 3D, defining events and parameters, processing multiple trials.

Can process IMU data

- NEXUS** feature-set designed specifically for life sciences:
- one-click pipeline processing
  - event identification
  - automatic capture
  - native MATLAB/Python integration
  - data management

## APPLICATIONS

Capture anywhere – indoors or outdoors, in adverse conditions: a racetrack, sports field, ski jump, research centre, lab

Track multiple bodies, a single body or just one part, including detailed hands, face, feet and spine. Able to capture single or multiple bodies

Biomechanics applications from stroke to amputee rehabilitation, limb movement studies, research on developmental conditions (e.g. cerebral palsy, arthritis), posture analysis, balance & reaching studies

Sports applications of all kinds: tennis, golf, athletics, running, basketball, baseball, cricket, long jump, hurdles, weight lifting, high jump, football, and swimming

FOR MORE INFORMATION VISIT:  
[www.vicon.com/lifesciences](http://www.vicon.com/lifesciences)

# VISUALIZING NEW FRONTIERS OF CLIMBING WITH NEXUS INSIGHT

The School of Sport and Exercise Science at the University of Derby is using its Vicon system to map the biomechanics of a sport that has traditionally been neglected by the motion capture world - climbing. Nexus Insight looks to give researchers at the university a powerful tool for feeding their discoveries back out into the field.

"The beauty of Vicon is the ability to translate research into practice," explains James Mitchell, Senior Lecturer in Sport and Exercise Science at the university. "It's an amazing tool to help us really understand climbing movement from a scientific point of view, and then actually translate that understanding into practice."

"Traditionally, climbing has been analyzed using just a video camera or purely through the subjective experience of coaches," expands Simon Briley, Lecturer in Sport & Exercise Science. "What we're trying to do is take that guesswork out and provide really detailed, objective data for coaches and athletes."

To that end, the University has established a volume equipped with a climbing wall, 12 Vantage cameras and a number of IMUs, all running alongside Nexus.

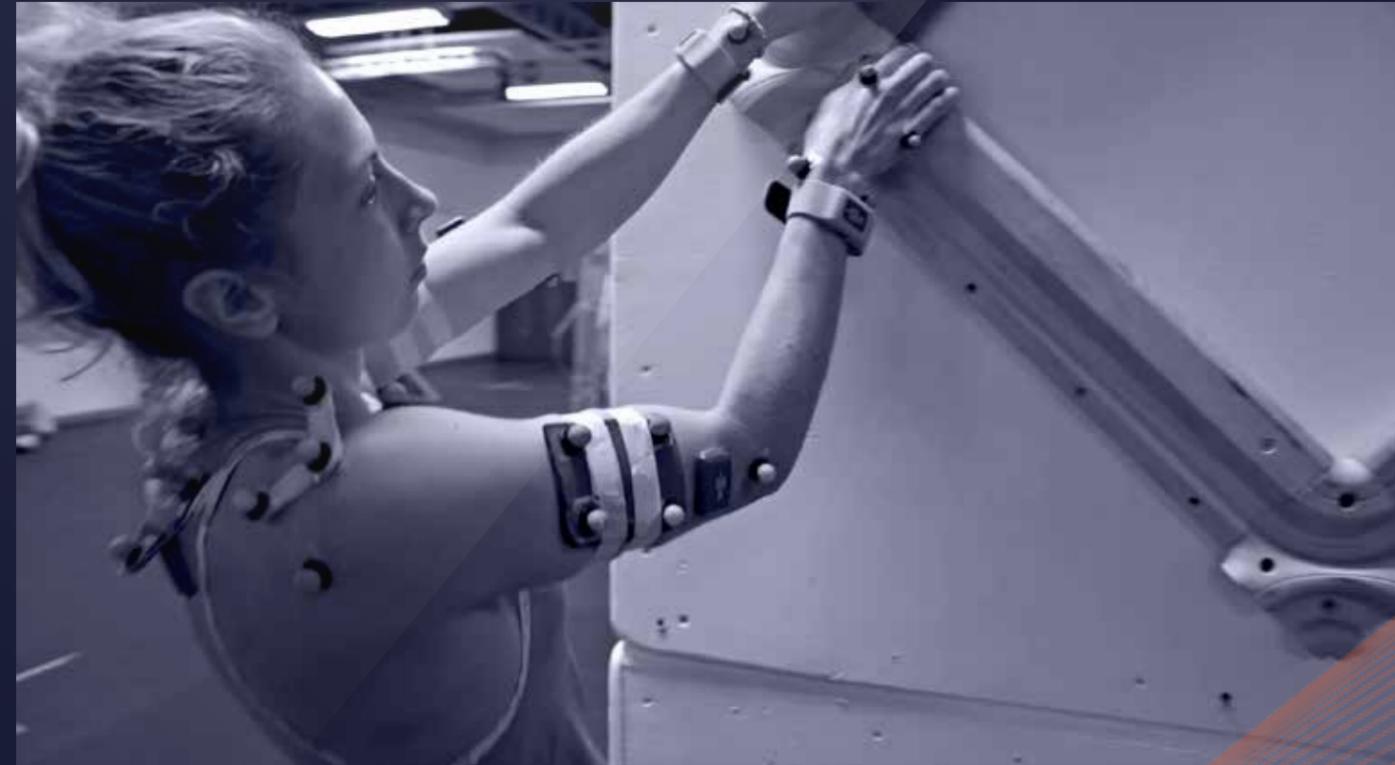
"Vicon offers amazing tools to really develop our understanding of climbing performance, of how to improve it and how to reduce injury. What's been amazing is the connectivity between Vicon motion capture, the IMUs and Nexus. It's just really seamlessly integrated, which means I can pass on all that data to coaches and athletes," says Mitchell.

Nexus Insight is the final piece of the puzzle for communicating practical, actionable insights for coaches and athletes at the forefront of climbing performance.

## BRIDGING THE GAP BETWEEN ACADEMIA AND PRACTICE

For Briley, the strength of Nexus Insight is its ability to make biomechanical data more accessible, allowing users without deep backgrounds in motion analysis to work with the data from their Vicon system.

"Users now have these simple steps to go through using this tool which integrates really nicely into Nexus itself.



"That's just another example of Vicon being one step ahead of us, producing the next technology that will be really valuable to us moving forward."

"We can then allow them to get data out visually to see what it's telling us, because being able to extract all this data is always a big learning curve for students. Getting into the numbers and being able to understand the data is really crucial."

"That's what Nexus insight can really help with. We can help our students understand their data and display that information really well."

Briley sees practical benefits of Nexus Insight beyond the world of academia, too. "When we work with climbing coaches we can then give this as a really nice, quick feedback tool to deliver these insights. We can give them very clear, quick-to-produce reports that they can use to understand that data."

Similarly, Briley sees Nexus Insight as a powerful tool for working directly with climbers. "We've got our High Performance Unit, where we can get athletes to come in and we give them support. One of the key things that we can do with Nexus Insight is use it to produce reports that an athlete can take away and say 'Fantastic, that's the data I can use'. And that won't require much time from us. It won't take hours and hours of intensive processing and analysis. We can generate a report using the templates that Nexus Insight already provided, and the athlete can take action based on that data.

"That's just another example of Vicon being one step ahead of us, producing the next technology that will be really valuable to us moving forward."

# NEXUS INTEGRATION

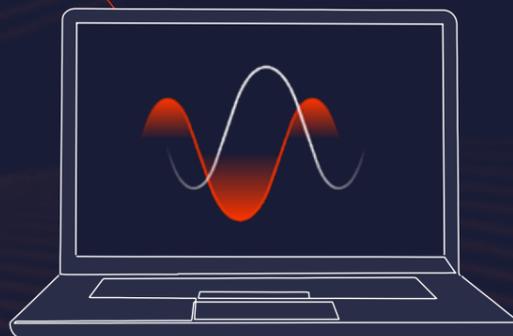
## THE CENTER OF YOUR MOTION CAPTURE ECOSYSTEM

Nexus is the most powerful all-inclusive modeling and processing tool for movement analysis on the market. Created specifically for the life sciences community, Nexus delivers precise, repeatable data and clinically validated model outputs.

Designed to sit at the heart of your life sciences project, Nexus has a host of automated features, intelligent processing and flexible controls. Biomechanists can precisely synchronize motion capture data and third-party integrations for a customized and seamless workflow.

## USER EXPERIENCE

Vicon's software platform is widely-recognised as best-in-class for gait, sport, and biomechanics research. Nexus Insight complements the existing Nexus ecosystem and has been tested by Vicon customers, for application across the entire life science sector.



## NEXUS INSIGHT INTEGRATION

- Launch Nexus Insight from within Nexus 2.16 or as an independent program
- Supports Windows 10 and Windows 11 64-bit operating systems
- Play up to four videos with 3D player simultaneously on PC and laptops
- Meet Vicon specifications to run a system on a laptop
- Local Nexus Insight installer for offline accessibility



**BESPOKE MOTION CAPTURE LENS**

Valkyrie includes a new, custom-built varifocal lens to increase range and precision.



**INCREDIBLE SPEEDS**

Valkyrie's native speeds go up to 500FPS, and as high as 2000FPS when using windowing techniques.



**MARKET-LEADING RESOLUTION**

With a resolution of 26MP Valkyrie offers unparalleled clarity.



**INTUITIVE OPERATION**

At 30fps, Valkyrie's full video preview mode is Vicon's smoothest yet for easier camera monitoring.



**A CAMERA FOR ANY ENVIRONMENT**

With Valkyrie, you can capture any movement in any environment, safe in the knowledge that your camera is IP65-rated.



# NEXUS INSIGHT AND VALKYRIE

**LEGENDARY CAPTURING AND REPORTING**

Use Nexus Insight to display outcomes from Valkyrie, Vicon's best-in-class camera for movement analysis.

**CONFIDENCE IN HIGH-FIDELITY CAPTURE**

Valkyrie pushes the boundaries of motion capture in the life sciences with unbeatable range, speed and field of view.

Valkyrie offers unprecedented levels of detail with pixel counts of up to 26MP, capturing complex structures with extraordinary fidelity. Capture speeds of up to 2000FPS enable users to track incredibly fast-moving subjects such as athletes.

The camera's unique, custom-designed varifocal lens optimizes performance, no matter the application. Its wide, center and narrow field of view options can be combined within your setup to ensure the best possible coverage for your data capture. The combination of Valkyrie's IP65 rating and incredible range makes capturing subjects in their natural environments easier than ever.

**FREE UP YOUR VALUABLE TIME**

Valkyrie is engineered from the ground up to minimize its demands on your time. That means you can focus on what matters: your data and your subjects.

Even if you need to move your system for a project based out in the field, you can begin your session quickly. Valkyrie's 30fps full video preview mode makes camera aiming fast and accurate, no matter the environment.

Once you're set up, the robustness of Valkyrie's tracking and calibration combines with clear display features to allow you to focus on your project.

After capture, high quality data combined with Valkyrie's internal camera intelligence minimizes cleanup time and processing. Partnered with Nexus's trusted ecosystem, your motion capture experience will be streamlined and efficient.

AS TRUSTED BY:



For more information visit  
 our website or contact us.  
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