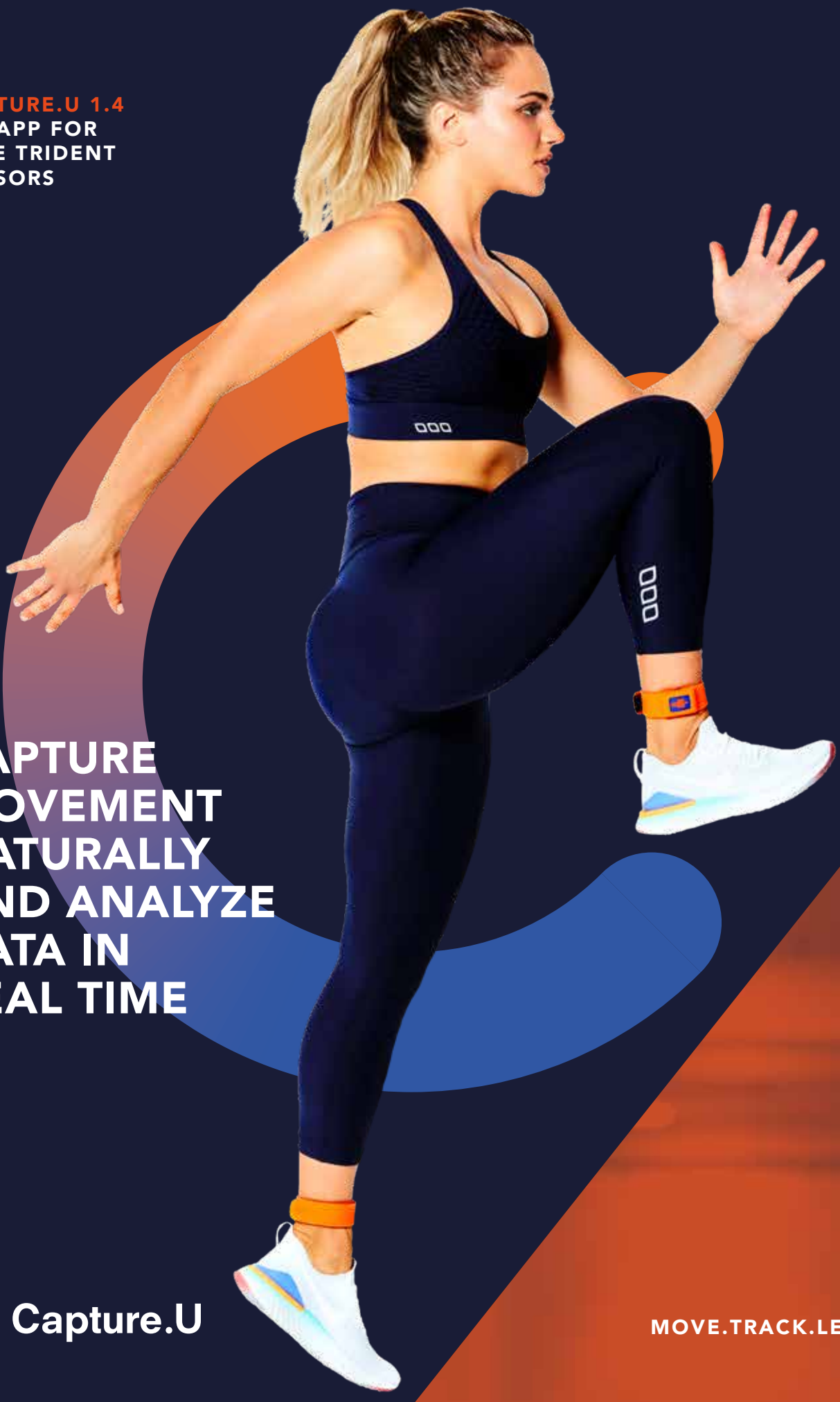
VICON | LIFE SCIENCES

CAPTURE.U 1.4
iOS APP FOR BLUE TRIDENT SENSORS

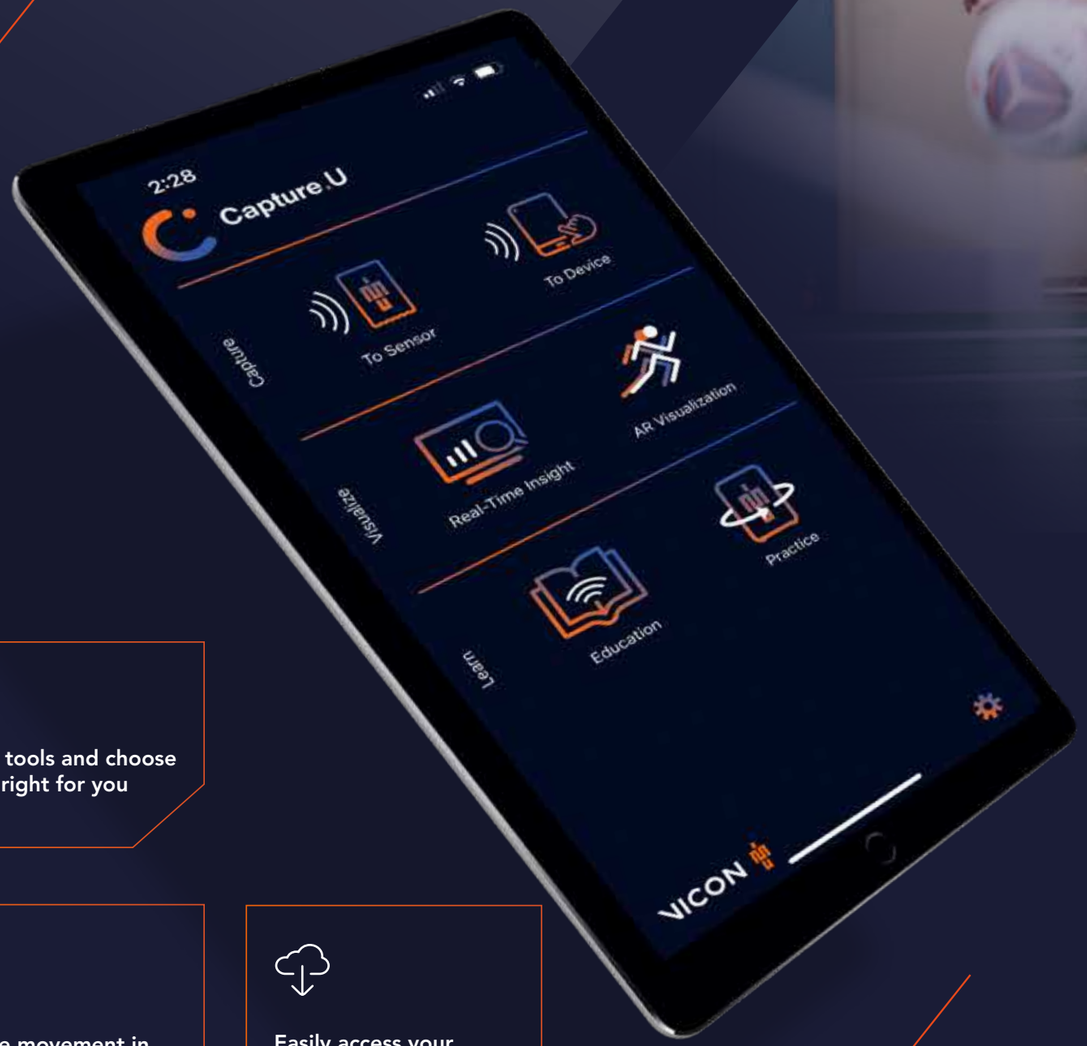


CAPTURE MOVEMENT NATURALLY AND ANALYZE DATA IN REAL TIME

Capture.U

MOVE.TRACK.LEARN

COLLECT & ANALYZE DATA IMMEDIATELY



CAPTURE.U, THE LATEST iOS APP FROM VICON, OFFERS A WHOLE NEW LEVEL OF INSIGHT INTO HOW MOVEMENTS CAN BE CHARACTERIZED.

Collect data on human movement where it matters most: in a subject's natural environment. Then learn the tools and techniques needed to effectively analyze and evaluate that information.

Access tools and choose what's right for you

Capture movement in a natural environment

Easily access your data

Working seamlessly with Vicon's Blue Trident sensors, Capture.U offers multiple ways to capture and view data. With Capture.U, your device becomes a window that allows you to see beyond the naked eye to the data underpinning human movement.

Vicon has built Capture.U to be powerful, yet easy to use, enabling a wide range of users from sports coaches and teams to sports scientists, students, biomechanists and researchers to learn more about how inertial sensors work and to understand that data.

Capture.U

DEEPEN YOUR PERFORMANCE INSIGHTS WITH CAPTURE.U

OPEN UP THE POTENTIAL OF INERTIAL

Download Capture.U for free from the iOS App Store and use with Blue Trident to reap the benefits of capturing accelerations at up to 200g.

Download here

JOINT DATA

Access insights into 2D and 3D joint angles with AR Visualization mode, powered by Apple's ARKit, all while with your subject. Select a joint to see its kinematic data and the joint position and angles in degrees. Set movement goals for your subject using benchmark values that trigger an audio alert when the goal is achieved or exceeded.

REAL-TIME VIDEO OVERLAY

See movement data overlaid on video for real-time analysis and later assessment. Share the data with your subject immediately or review it later to increase their engagement.

CAPTURE MORE

The app connects up to 20 Blue Trident sensors over a range of 24 meters. Collect a greater depth of data on one or more subjects, over a greater distance.

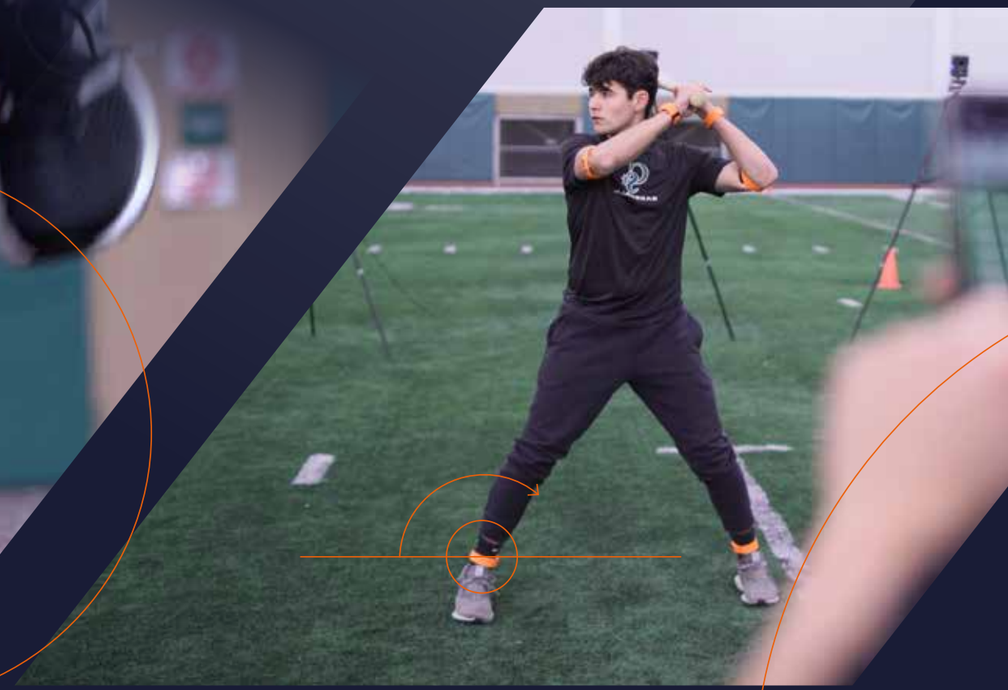
Capture.U

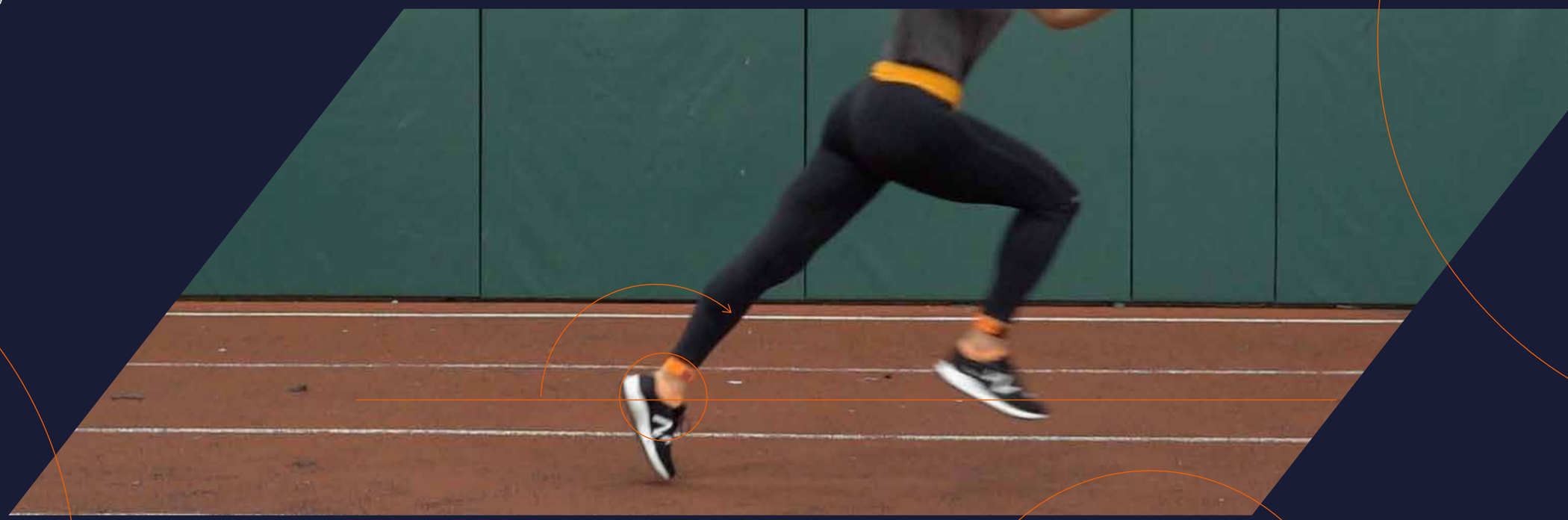
GLOBAL ANGLES

EXPLORE GLOBAL ANGLES FOR FRESH INSIGHTS INTO HOW TO CHARACTERIZE HUMAN MOVEMENT.

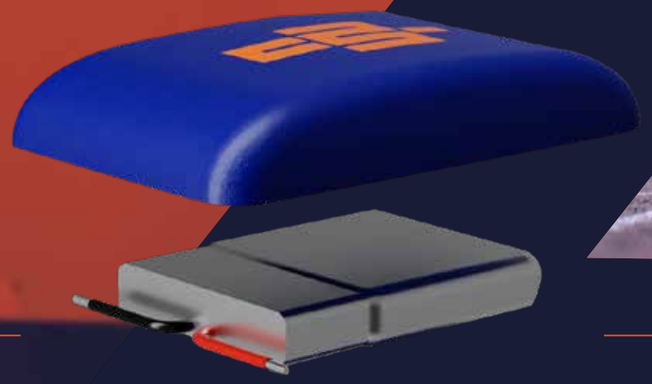
Blue Trident fuses accelerometer, gyroscope and magnetometer data to calculate global angles onboard the sensor, offering data across all modes in Capture and Visualize.

You can also display global angles in real-time and stream them to your device along with optional video overlay across all modes in Capture and Visualize.

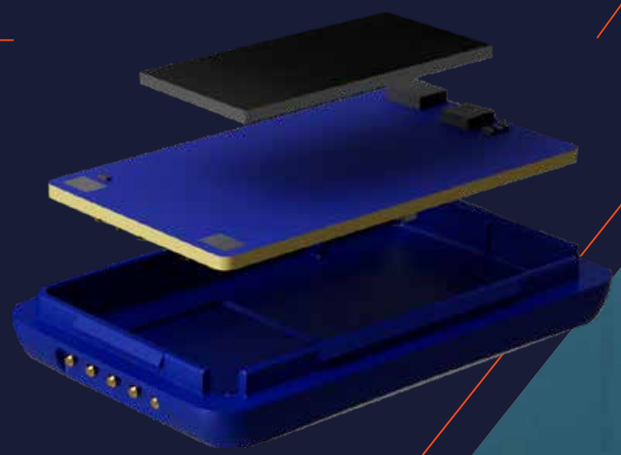




MULTIPLE WAYS TO CAPTURE AND ANALYZE DATA



CAPTURE MODES



CAPTURE TO SENSOR

Ideal for anyone who needs to capture movement from activities where you're unable to use Bluetooth or need to capture from large numbers of subjects simultaneously i.e. long distance running or swimming.

- Capture data - up to 12 axis - directly to your Blue Trident sensor's memory
- Store large volumes of data
- Connect up to 20 Blue Trident sensors
- Download data for later review via Capture.U desktop
- The information can be complemented with reference video captured separately

CAPTURE TO DEVICE

Ideal for team sessions or for researchers who are seeking to collect data from more than two sensors, and want the convenience of storing that data on their in-field iOS device.

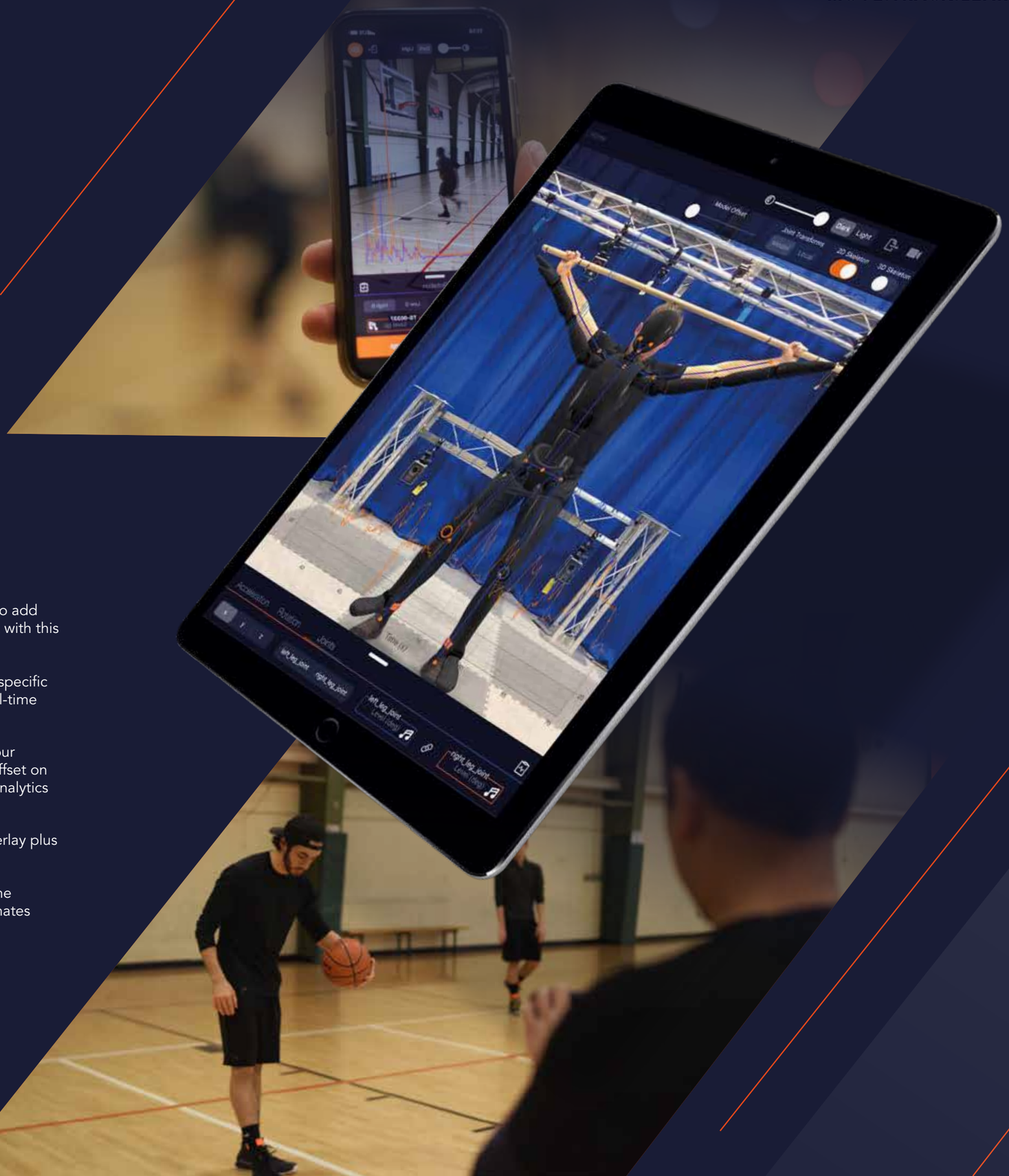
- Users can capture from up to 14 sensors* alongside reference video data directly from the device, enabling tracking of multiple athletes in the same location simultaneously
- Collect low-g, high-g or global angle data via Bluetooth without docking your sensors
- Immediately export data via your iOS device

* Depends on iOS device

Capture.U

VISUALIZE

ACCESS DATA (INCLUDING APPLE'S AUGMENTED REALITY KIT) IN REAL-TIME FOR IMMEDIATE REVIEW AND FEEDBACK



REAL-TIME INSIGHT

Ideal for coaches, researchers or students who want to gain a deep understanding of any movement and review performance in real-time. Capture.U offers a live video overlay and enables users to create a report to share with their subjects for later review.

- Capture live movements for streaming of real-time data from up to two sensors
- The data (from the high or low-g accelerations or gyroscope) is displayed over the video
- Set an objective benchmark and the app will trigger audio feedback when the threshold is exceeded
- Export video and data in a report for later review

AR VISUALIZATION

Ideal for anyone who wants to explore AR to add another level of data to your measurement, with this cutting-edge application of Apple's ARKit.

- Capture and visualize kinematic data on specific joint angles, measured in degrees, in real-time with video overlay capability
- Display 2D and/or 3D visualizations of your subject's movements either overlaid or offset on real-time video for immediate, intuitive analytics into subject performance in the field
- Export and share the video with data overlay plus the 2D and/or 3D overlays
- Do everything that you can with Real-Time Insight, although ARKit Joint Angle estimates cannot be exported

NOTE: AR Visualization can only be used once a sensor is connected to the app.

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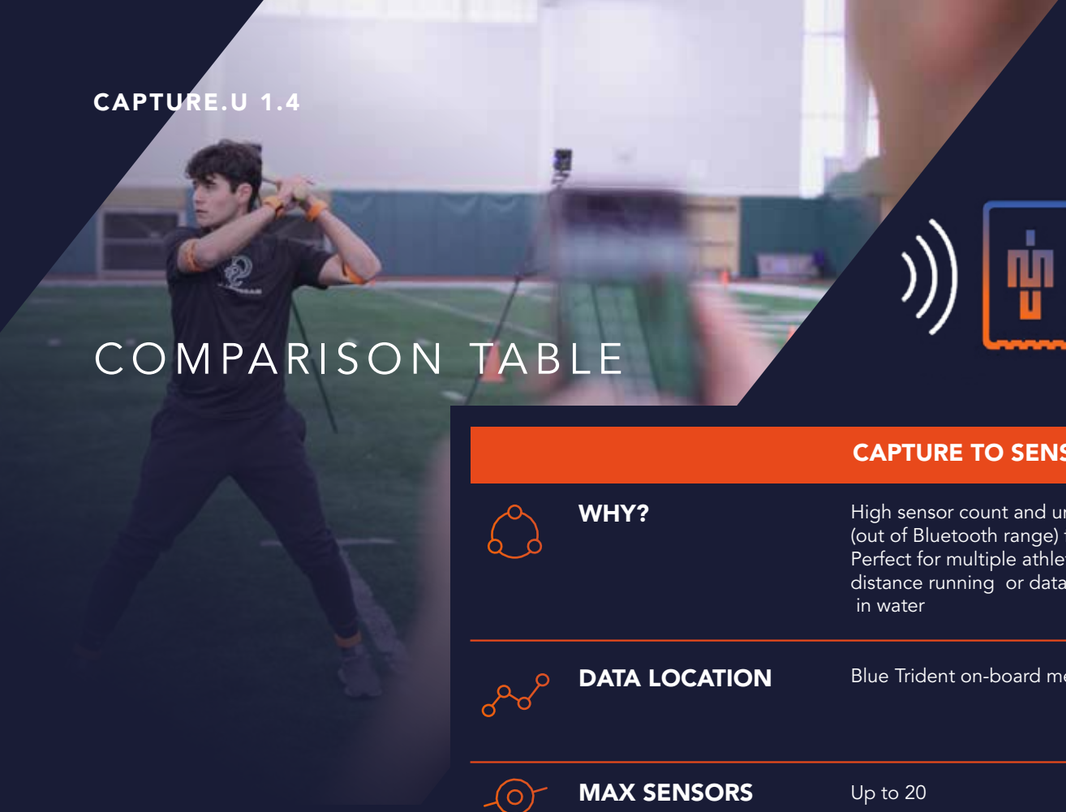


COMPARISON TABLE

	CAPTURE TO SENSOR	CAPTURE TO DEVICE	REAL-TIME INSIGHT	AR VISUALIZATION
WHY?	High sensor count and unlimited range (out of Bluetooth range) for later review. Perfect for multiple athletes for long-distance running or data collection in water	Higher sensor count than real-time insight within bluetooth range for immediate data export e.g. multiple athletes training in the same location	Real-time data streaming with video overlay; can add benchmarks with audio alert e.g. a coach and athlete reviewing performance; users can create a shareable report	Use Augmented Reality to help visualize and understand more deeply the movements taking place
DATA LOCATION	Blue Trident on-board memory	Capture.U	Capture.U	Capture.U
MAX SENSORS	Up to 20	Up to 14 [1]	2	2
WHAT?	Sensor data Video (reference video only) (optional)	Sensor data Video (reference video only) (optional)	Sensor data Video overlay in real time	Sensor data Video overlay in real-time ARKit 3 visualization Joint angle (degrees)
AXIS [2]	High g, low g, gyroscope, magnetometer OR Global angles (high g optional)	Low g, gyroscope, magnetometer OR High g OR Global angles	Individually visualize: low g, high g, gyroscope, global angles (exports all)	Individually visualize: low g, high g, gyroscope, global angles (exports all) Optional: AR kinematics
CAPTURE RATE [3]	High g: up to 1600 Hz Low g/gyroscope: up to 1125 Hz Mag: up to 112 Hz Global angles: 225 Hz [4]	High g: 800Hz Low g/gyroscope: up to 800 Hz Mag: up to 112 Hz Global angles: 225 Hz [4]	High g: 800 Hz Low g/gyroscope: 500 Hz - Global angles: 225 Hz [4]	Joint Angles: 60 Hz High g: 800 Hz Low g/gyroscope: 500 Hz Global angles: 225Hz [4]
RANGE [5]	Unlimited	Bluetooth: up to 24m	Bluetooth: up to 24m	Bluetooth: up to 24m

1 Depends on iOS device.

2 IMU data export is dependent on axis selected.
Note only 3-axis can be displayed, e.g. low-g displayed but low-g and gyro data is exported.

3 Actual collection frequency will depend on how many sensors are being used.

4 Raw data for global angles is 225 Hz for the low-g/gyroscope and 70 Hz for the magnetometer.

5 Vicon internal testing, indoors.

Capture.U

LEARN THE FUNDAMENTALS OF MOTION ANALYSIS WITH CAPTURE.U

LEARN THE THEORY AND PRACTICE OF INERTIAL MOTION ANALYSIS WITH CAPTURE.U'S ACCESSIBLE LEARNING TOOLS FOR STUDENTS, COACHES AND MORE.

EDUCATION

Teaches users the foundations of inertial tracking, backed by expertise from the world's most trusted motion capture company. Users will learn what an IMU is and how it works, what it can measure and how inertial motion analysis can be used to gain deep insights into human movement.

PRACTICE

Turn theory into practice with hands-on exercises that will translate knowledge into practical skills. Users will learn how to capture basic human movements, stream them in real-time, interpret the data they're generating and to export their session for desktop analysis and reporting.

Capture.U

CAPTURE.U DESKTOP

IDEAL FOR TAKING A DEEPER DIVE INTO THE DATA YOU'VE CAPTURED AFTER A COACHING OR RESEARCH SESSION.

Download free of charge from the Vicon website

Download here

- Share content and export the data to compare multiple captures to track changes in performance over time
- Seamless export of data captured in the field
- Export CSV files to any analytics platform (Excel, MATLAB, Python) for further analysis
- Available for both Windows and Mac OS desktops
- Includes walkthroughs and tutorials

Export data as an x1d file so Vicon Nexus can read and collate sensor date.

Aligned export of data by upsampling low g data to synchronize with high g data capture frame rate.

Capture.U

COMPLETE COMPATIBILITY

BLUE TRIDENT

ENGINEERED TO CAPTURE THE HIGHEST QUALITY DATA

With high fidelity measurement, download speeds five times faster than before and real-time analysis, Vicon's Blue Trident is capable of capturing accelerations up to 200g.

Our market-leading IMU, Blue Trident is lightweight, easy to use, flexible and reliable.

Capture.U comes free with every Blue Trident, so you can get started capturing activity straight away.

BEACON

PRECISELY SYNCHRONIZE INERTIAL INTO THE OPTICAL WORLD

With intuitive plug-and-play technology, Beacon creates a synchronized wireless network with lightning-fast throughput and low latency.

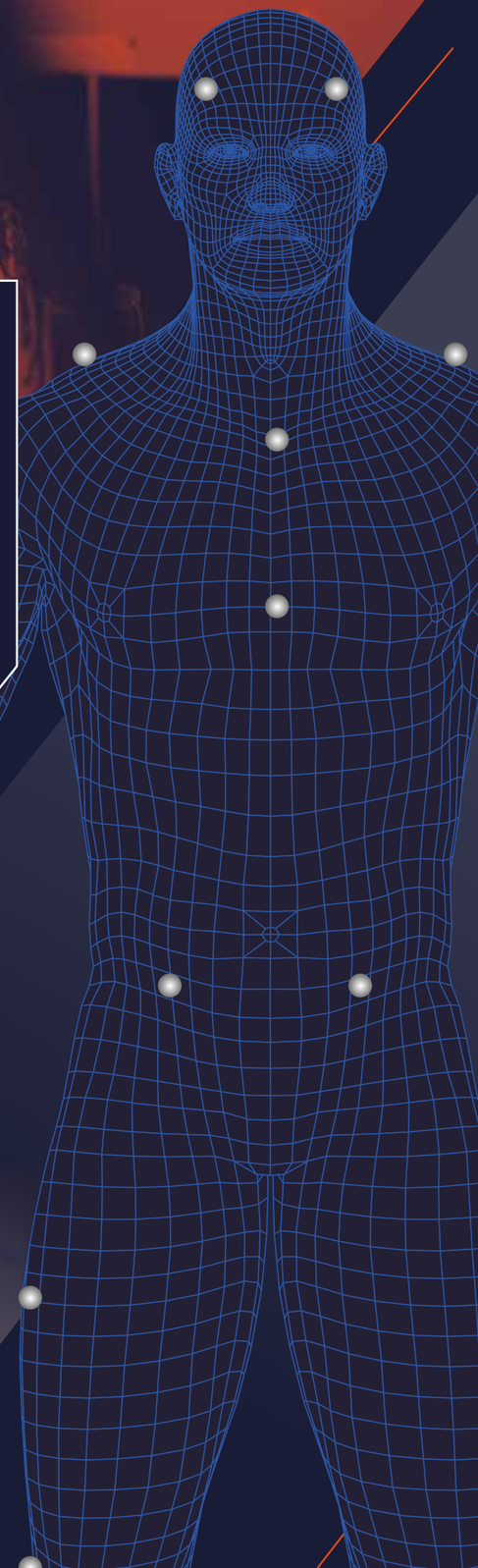
Use it to combine inertial measurement with Vicon's world-class, optical motion capture system, Nexus – and precisely synchronize your data sets.

NEXUS

THE MOST TRUSTED 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.



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