



## Innovative solutions for neuroscience research

*Powerful software tools, fully integrated labs, and excellent support.  
Trust our 30+ years of experience to make your project a success.*

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**Noldus**  
Information Technology

# NoldusHub

- *One platform for your multimodal research*
- *Real-time, synchronized integration of your data*
- *Powerful visualization for meaningful insights*
- *Privacy-sensitive participant data securely stored*

When we want to understand the motivations and cognitive processes behind human behavior, it is crucial to combine insights from both behavioral and physiological responses. After all, people may tell you about what they are experiencing, but this can be different from what their bodies and facial expressions reveal. By collecting and analyzing data from different modalities, researchers can gain a more comprehensive understanding of human behavior. They can identify patterns and relationships that may not become clear when only studying one modality.



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For example, multimodal research helps to advance our understanding of the cognitive processes underlying human behavior, such as attention, memory, and decision-making. By examining the ways in which people process information and respond to their environment, multimodal research can provide insight into the complex interplay between perception, attention, memory, and action.

The process of integrating and synchronizing these different types of data can be challenging, especially when using multiple stand-alone solutions for your data collection. All these acquisition tools have to be calibrated and started. This often leads to time delays, not to mention frustration when things go wrong or don't work. And how do you know for sure that all these data streams are recorded in sync?

With NoldusHub®, multimodal research is made easy. Set up your project and start recording with the click of a button. You no longer have to struggle with combining several datasets from different data acquisition tools. NoldusHub is at the heart of your research facility and will deliver you an all-in-one solution for your neuroscience research. Enjoy seamless control, calibration, and monitoring of all your behavioral data streams. NoldusHub allows you to spend less time on technology, allowing you to focus on your research.

## EASY TO USE

One platform, one interface, one control button. You are ensured of quality data and benefit from an easy workflow. For example, software of all connected hardware devices is fully integrated, including calibration of eye trackers. You can also control, calibrate, and monitor all devices from one place, and start your recordings immediately from the same location. Another benefit of NoldusHub's easy workflow is that you can record multiple behavioral modalities from several participants at the same time.

## MEANINGFUL RESULTS

Get real-time visualization and meaningful results, both during and after data collection. NoldusHub allows you to learn about workload and attention, read emotions, and understand levels of excitement and stress. The software visualizes a large selection of parameters in real-time, providing you with insights on the spot. You will find even more options for visualization in replay. You can also see all synchronized and integrated results for each participant, in one clear overview. Want to present your data? Export your visualized data, including marked events and videos of the participant's face and screen.

## SECURE STORAGE OF DATA

In NoldusHub, privacy-sensitive data is kept both safe and accessible. For example, to secure your data, you can set different user roles and manage access for each user. You can also log in through the browser, helping you to work both flexibly and securely. Moreover, the software allows you to acquire data whenever you like, while access is controlled via the NoldusHub network. This dedicated network ensures that all collected data stays on your premises and remains your property.



### Fully integrated system

One system, one platform, one data-set. NoldusHub is fully integrated and offers meaningful results.



### Quick and easy with live data view

Calibrate, record, and visualize every signal from each participant, all from a single location.



### Take control of your data quality

Real-time feedback on each incoming signal at each stage, from setting up to recording.



### Record multiple participants at once

Work with multiple participant stations to enhance your research efficiency and save valuable time.



### Log in from anywhere

Manage every project from beginning to end, anytime and anywhere, for greater flexibility.



### Excellent data safety

All privacy-sensitive participant data is securely stored in one location, ensuring excellent data protection.

# Viso

- *Video recording and instant playback*
- *Highly scalable solution for one or more rooms*
- *Mark points of interest or make highlights*
- *Efficient workflow with remote control*

Viso® is the easy-to-use solution for creating synchronized recordings of video, audio, and computer screens. The software allows you to score events, record highlights, and add comments in real-time or offline. You can also play back videos immediately after recording, for quick evaluation. Moreover, you can record in several rooms at once, allowing sessions to take place in parallel. For an even more complete picture, Viso allows you to include EEG,



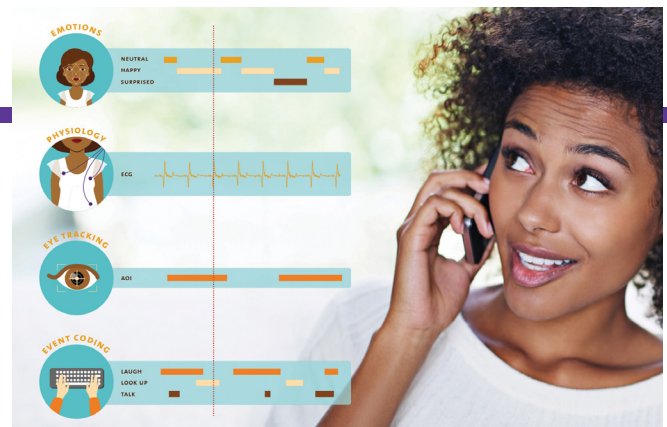
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eye tracking, and facial expression data. Combining Viso with The Observer XT allows you to analyze your data in more detail, providing you with a powerful and user-friendly recording and analysis solution. Working with Viso will save you valuable time.

# The Observer XT

- *Code behaviors live or from video*
- *Collect, integrate, analyze, and manage data*
- *Calculate descriptive statistics and assess reliability*
- *Easily select data segments*

The Observer® XT is the most powerful software tool for behavioral observation and video analysis, used by more than 20,000 researchers worldwide. The software allows you to code behaviors any way you want and facilitates easy integration of eye tracking, physiological, and FaceReader data for extensive analysis. You can also include EEG data for your cognitive load assessment or neuromarketing research. The tool allows you to



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analyze multiple videos and offers advanced analysis. Moreover, you can adapt this tool to your research needs by adding extra modules. Need to code on the go? Pocket Observer works on a range of handhelds and smartphones.

# FaceReader

- *Gain insight into emotional responses to stimuli*
- *Expression analysis with 99% accuracy*
- *Create custom expressions for your project*
- *Unobtrusive and objective observations*

Emotions instinctively influence our behaviors and decisions. Our face is often the best indicator for this, as our facial expressions convey emotions. FaceReader™ automatically analyzes facial expressions: happy, sad, scared, disgusted, surprised, angry, contempt, and neutral. Using the circumplex model of affect, you can describe the distribution of emotions in a 2D circular space, based on arousal and valence dimensions. Easily



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program a set of stimuli, mark events, and examine changes in emotion. Moreover, the Project Analysis Module allows you to select and visualize your data in more detail, as well as compare responses between different participants or groups.

# Portable lab

- *Set up your experiment anywhere*
- *On-site video and audio recording of behavior*
- *Record user interface, video, and audio synchronously*
- *Set up within minutes*

Some behaviors are difficult to study in a lab. For example, when you want to examine situational awareness, fatigue, or stress-related performance, you achieve the best results with on-site observation. A Noldus portable lab is compact and fits into one lightweight carrying case. It contains all the equipment you need to make live behavioral recordings, in any context. Once you have arrived at the observation site, you can start working quickly, as



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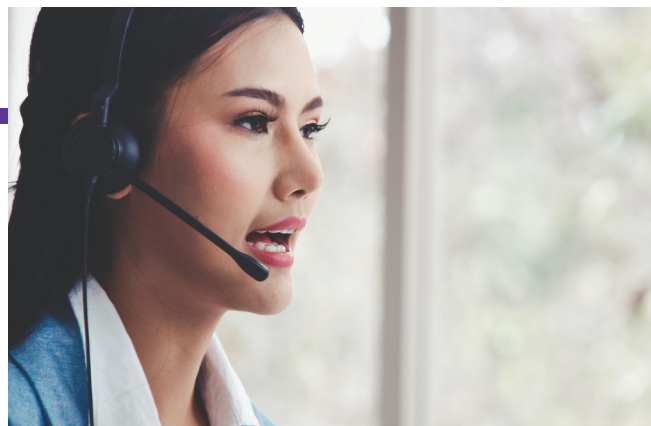
the lab is set up within minutes. Noldus experts are happy to help you customize the lab to include any additional equipment, such as an eye tracker or a heart rate monitor, which we can integrate into your portable lab.



# Services

- *Behavioral coding services*
- *Customized training courses*
- *Rent a system or software license*
- *More benefits with NoldusCare*

Benefit from a wide range of services, from our consulting services and training to rentals and NoldusCare. Our consultants understand how to turn data into meaning and will advise you on how to perform your research in the most efficient and effective way. You can also outsource your video coding work or ask our experts to analyze data you've already collected. Other options include renting equipment and software or scheduling a



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training course for your team. With NoldusCare, you'll receive all software upgrades, technical support, and warranties on Noldus hardware. This service gives you peace of mind, guaranteed project quality and continuity, and protects your investment.

# Your partner in research

- *Leading in behavioral observation and analysis*
- *Expert advice from our consultants*
- *Over 30 years of product innovation*
- *Worldwide service and support*

Noldus Information Technology develops innovative solutions for behavioral research. These can vary from industry standard software packages and lab equipment to fully integrated observation labs, including on-site installation, training, and support. With over 30 years of experience, you can trust us to translate your questions into practical and proven solutions. Our consultants have advanced degrees in behavioral sciences, helping



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you uncover behavioral patterns and turn them into actionable results. Looking for more in-depth information about your product? In MyNoldus, you'll find all product documentation, as well as training videos, frequently asked questions, and more.