



# Prophea.X

Expanding the spheres of behavioral research

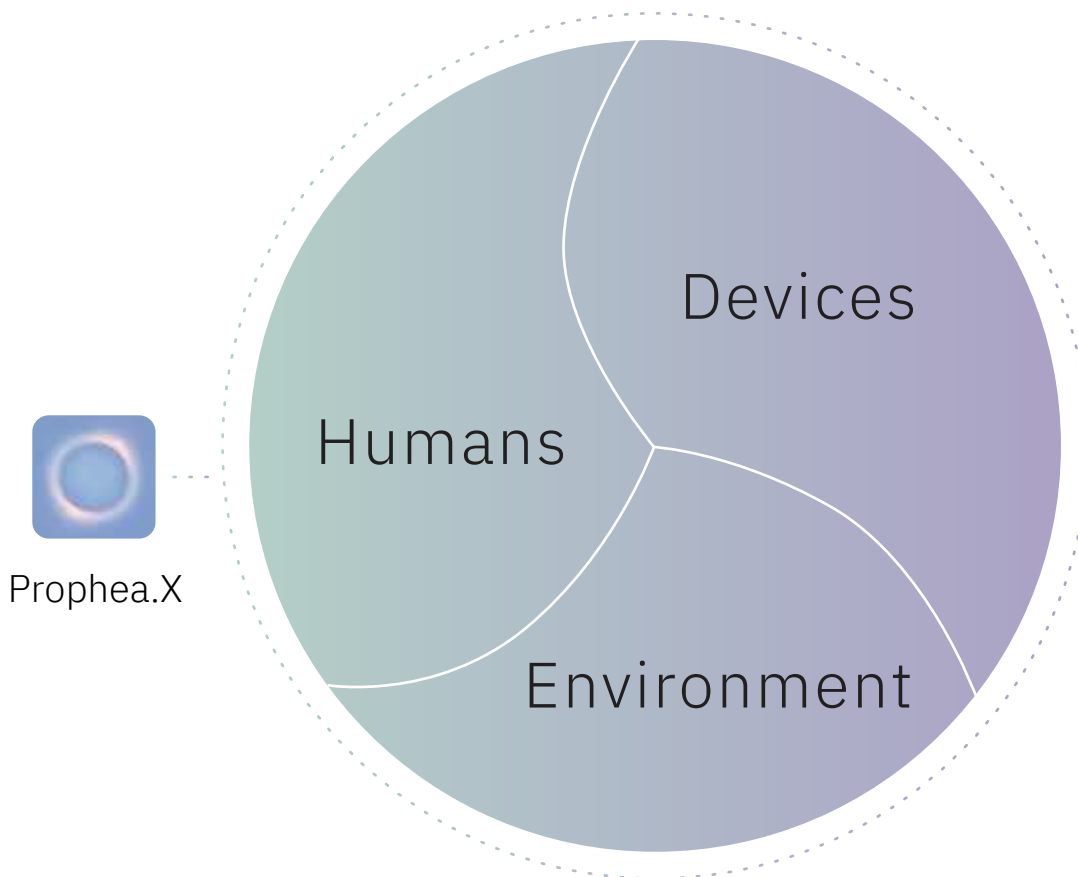
# Prophea.X

Behavior Analysis Solution

## Get Full Excess to Human Centered Insights

Prophea.X is a state of the art IT ecosphere connecting sensor-based, human behavior analysis methods most effectively in one ground-breaking application.

Prophea.X Unifies Complex Data Landscapes  
In Real Time, Offline or in Protected Systems



Prophea.X - A new Industry Standard

Flexible, Research - Grade Sensor-Fusion for

Human factors

Ergonomics

Training

Neuroscience

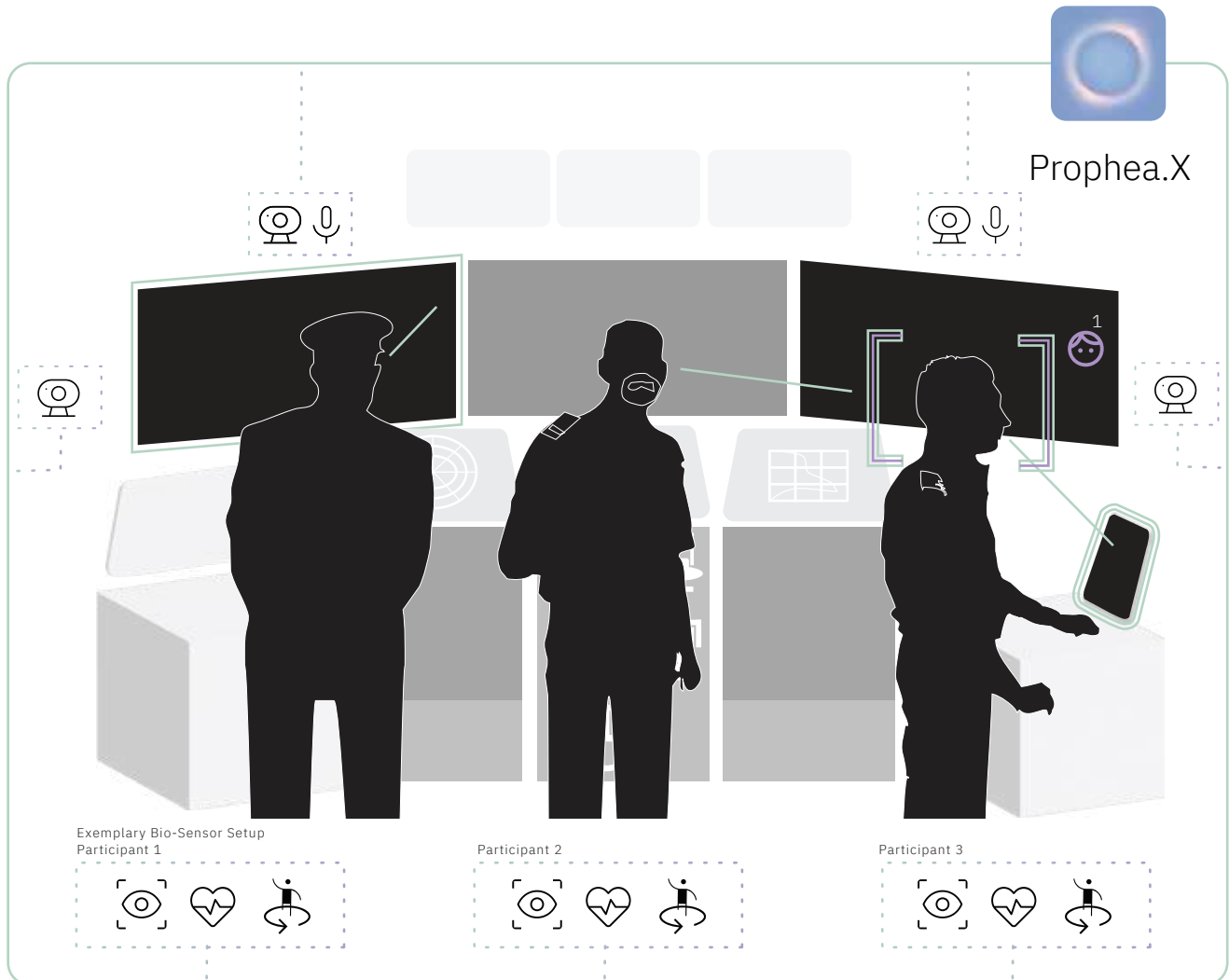
Psychology


Education

# Prophea.X

From AI powered Observation \_ to Optimisation

## 360° Situation Analysis



<sup>1</sup>  Object recognition corresponding with Eye tracking & Video signals requires Prophea<sup>autorecog</sup> Module

## Holistic & Infinitely Simultaneous

Instantly Synchronized Multi Subject Recording and Analysis for any setting.

Prophea.X is designed for research in most complex Multi Subject Scenarios: i.e. Ship bridge, Mission Control, Air- & Spacecrafts, Automotive & Specialised Vehicles, Life-, Cinema- & On-Screen-Entertainment. Prophea.X facilitates unlimited analysis of:

Gaze Behavior

Interaction

Attention

Cognitive State

Environment

Decision making

Vehicle data

Simulator data

# Prophea.X

A Modular IT Design for

## Infinite analysis objectives



Sport &  
Performance



Behavior  
Research



Training &  
Simulation



Performance-  
Monitoring

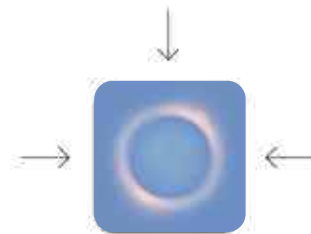


Road Safety  
Analysis



UX  
Research

## One Ecosphere



Prophea.X

## Two apps



Data Engine  
Data Recording & Life Monitoring



Analyzer  
Accessing Analysis Modules

## Flexible Analysis Modules

To fit your sensor- and analysis requirements \*



Video



Eye Tracking



Object Recognition



EEG / ECG / GSR



Motion



Audio



Coding



AR | MR | VR

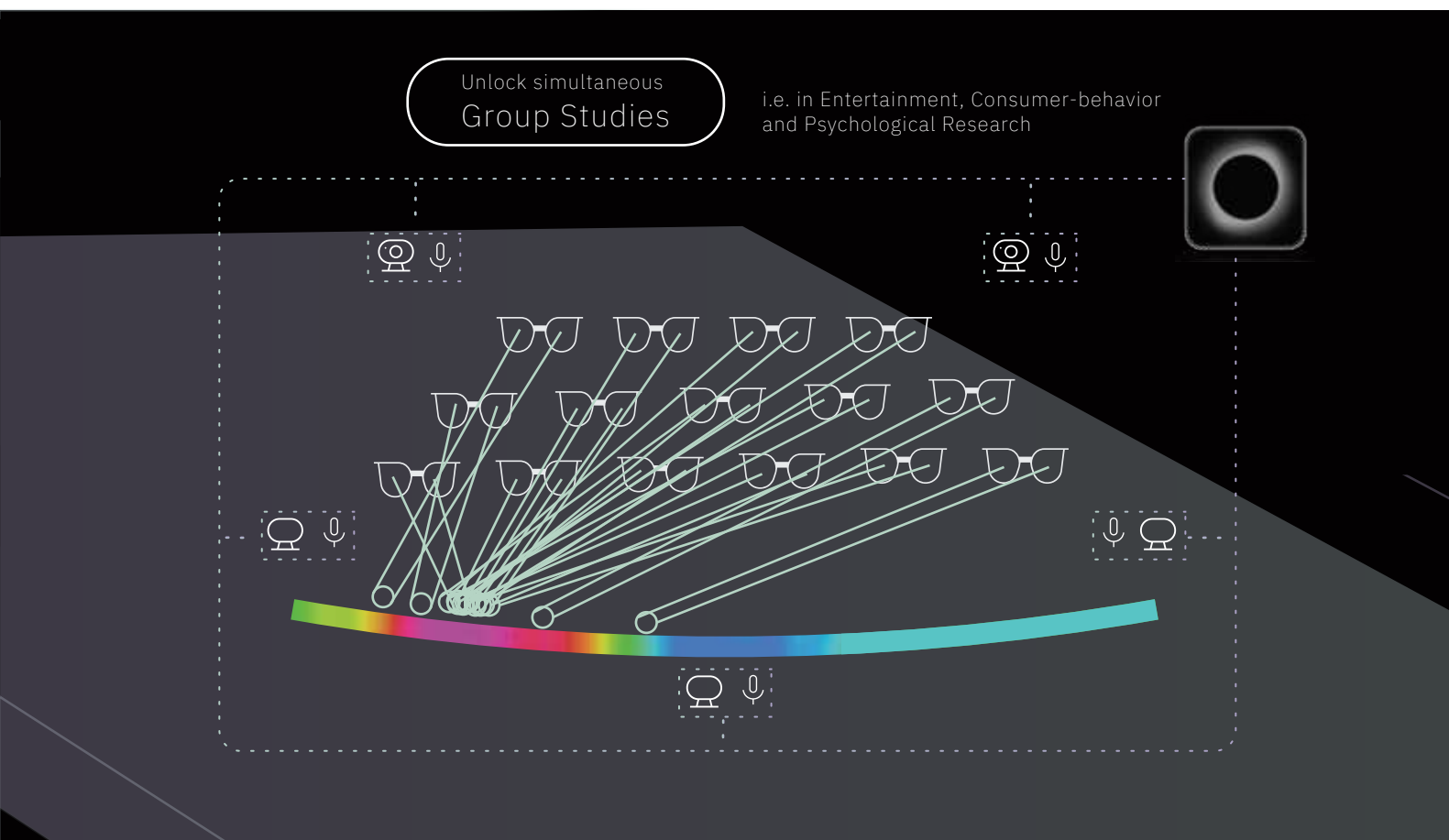
\*Availability dates vary

# Prophea<sup>Data Engine</sup>



## The big(gest) picture

Prophea.X Data Engine is empowering you to new levels in sample sizes. All subjects recorded simultaneously, experiencing the same external influences, while in real interaction:



## Collective Data Acquisition

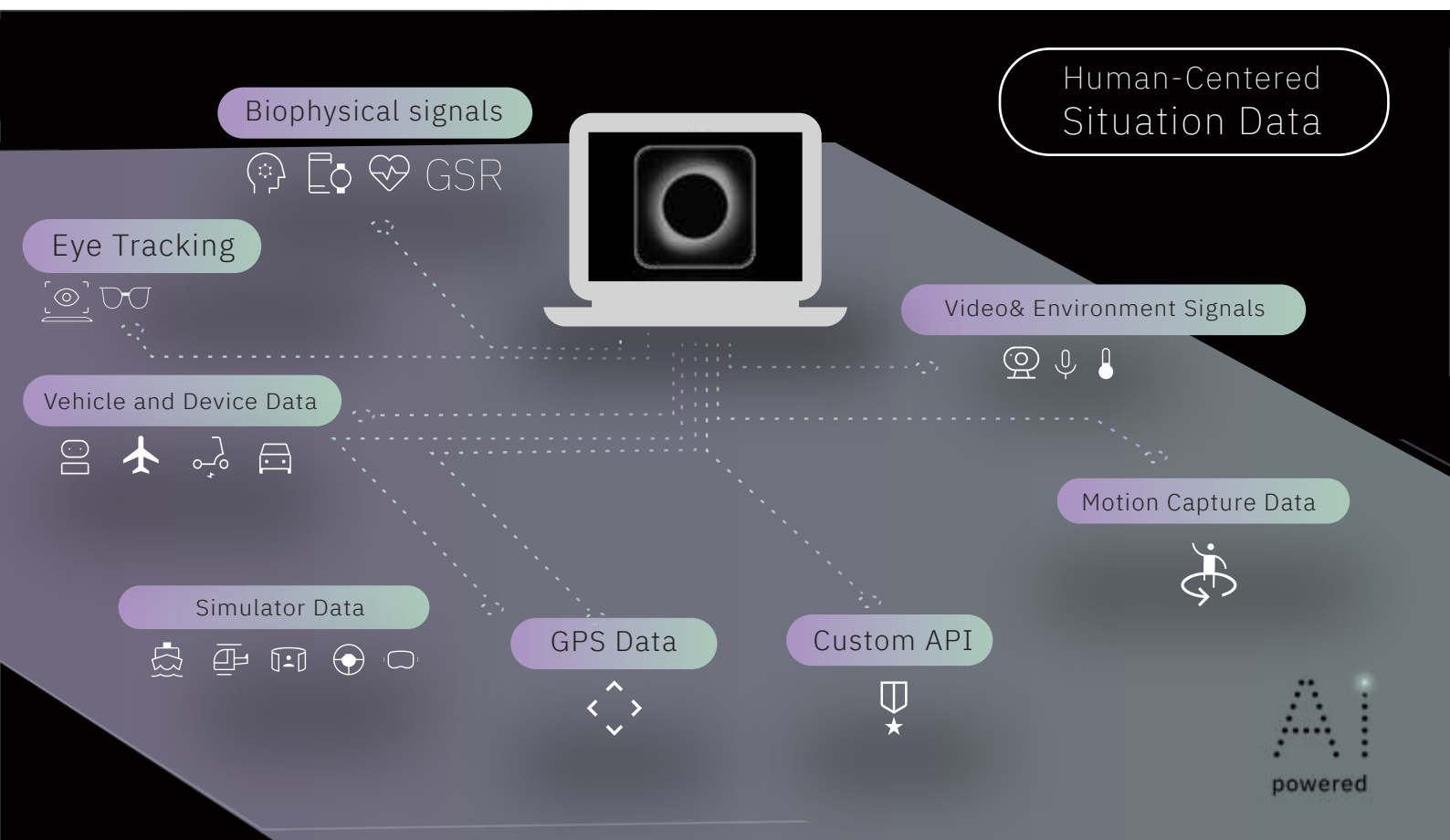
Prophea.X allows simultaneous recording and analysis of multiple interacting Humans, Humans and Machines / Robotic devices in perfect synchronicity and centrally triggered in one closed system while maintaining modest hardware requirements.

# Prophea<sup>Data Engine</sup>

New Spheres of Flexibility

## Any Sensor Any Environment

With its AI-powered flexibility to select master frequency and synchronization mechanism Prophea Data Engine is designed to perform independently, irrespective of data type or frequency.



## Integrating Elaborate Data Protocols

CAN BUS

ROS II

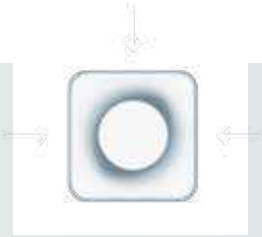
LSL Protocol

Simulator Integration

Powering the international standard 'Lab Stream Layer' for neural, physiological, and behavioral data streams, Prophea.X allows access to more than 120 Sensors and Devices. CANBUS interface connectivity allows direct access to automotive vehicle data.

Prophea.X Data Engine connects directly to robotic devices or simulators, allowing simultaneous triggering and data synchronicity from recording to analysis in Prophea Analyzer.

# Prophea<sup>Analyzer</sup>

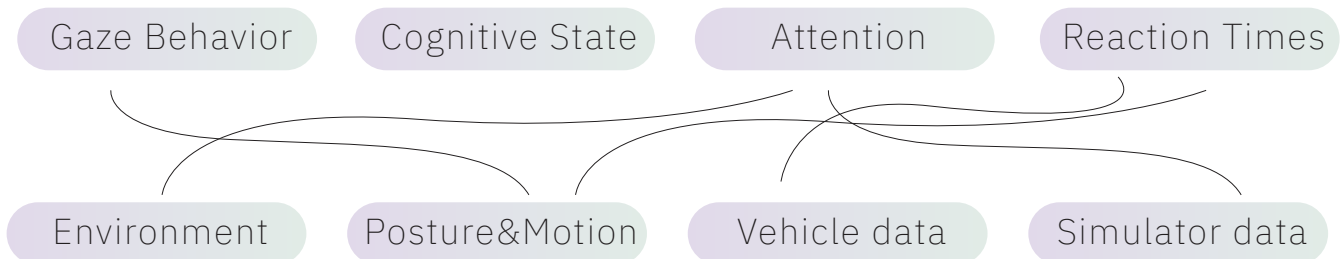


## AI Powered Multi Modal Analysis

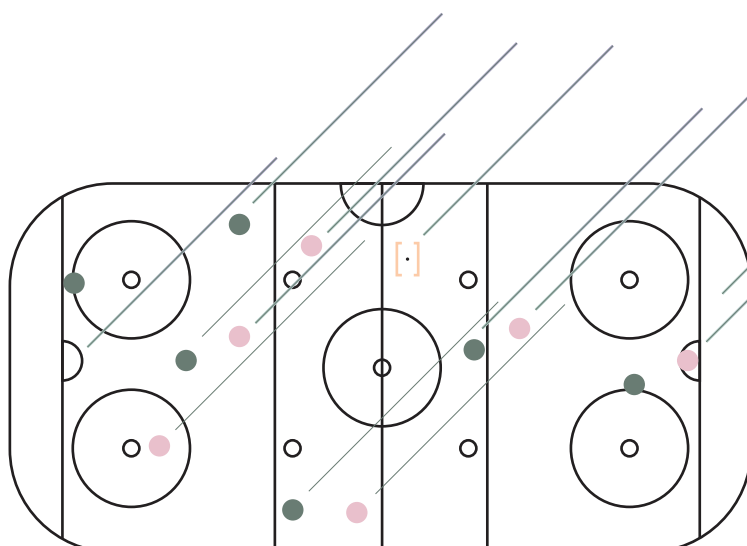
Prophea Analyzer facilitates analysis from 360° of Multi Modal Insights. Looking at one single or a group of subjects recorded in Prophea Data Engine, Prophea Analyzer delivers the powerfull Processing-, Analysis- and Reporting-Framework set in a highly customizable, minimalistic User-Interface.

Multi Modal Analysis in Prophea.X

## Boost Calculation Speed of Key Insights and Proof of Hypothesis to a new level



- Powering a clear framework designed to let you maintain focus
- Prophea Analyzer sets the stage for all current and coming analysis modules
- Powering Multiple Users, Prophea Analyzer permits colaborative workflows



Analyse Parallel recordings of multiple subjects:

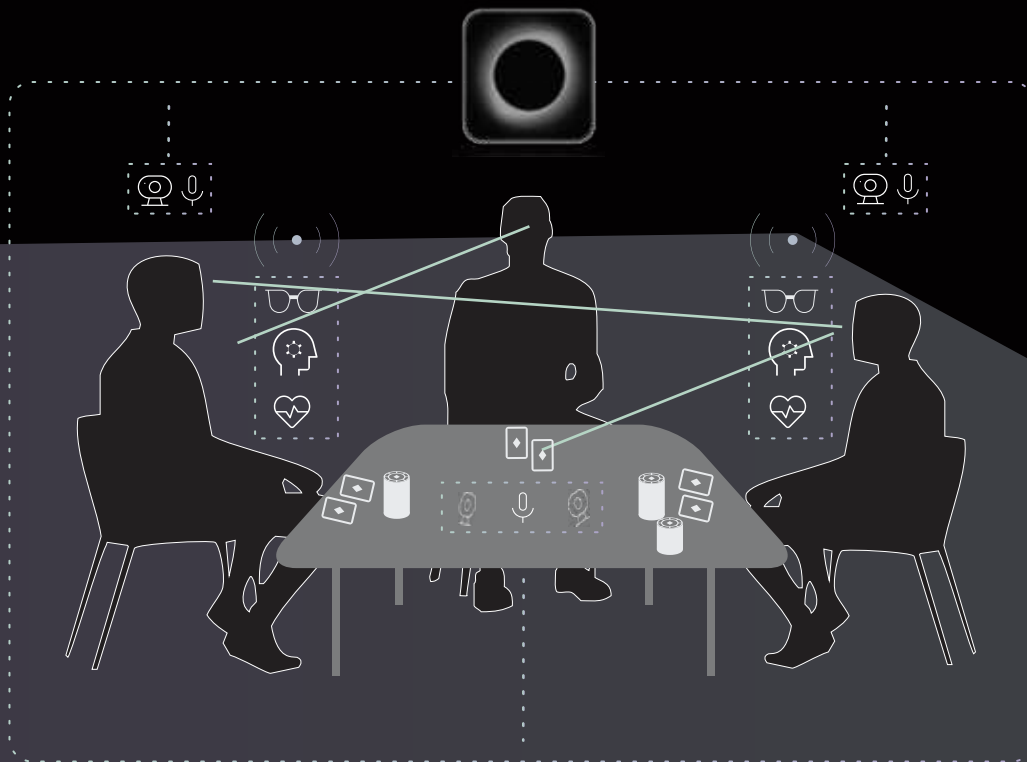
Video Feeds & POV  
Full Eye-Tracking Analysis  
Object Recognition  
Posture & Motion  
Position & Speed  
Cognitive State  
Heartrates  
Stress levels

# Prophea<sup>Analyzer</sup>

Analyze Complex Multi Subject Scenarios In One Take

## Interaction Analysis in a fraction of time

Analyse the most complex Multi Subject Scenarios using one streamlined platform. 100% Local, Offline Data Processing guarantees data security while maintaining modest hardware specifications using specialised modules.



A Holistic, Fully Scaleable Video & Biosensor Analysis Suite capable to reveal any pattern, secret or deficit





# Prophea<sup>eye</sup>



## Introducing Prophea.X<sup>®</sup> Eye Tracking

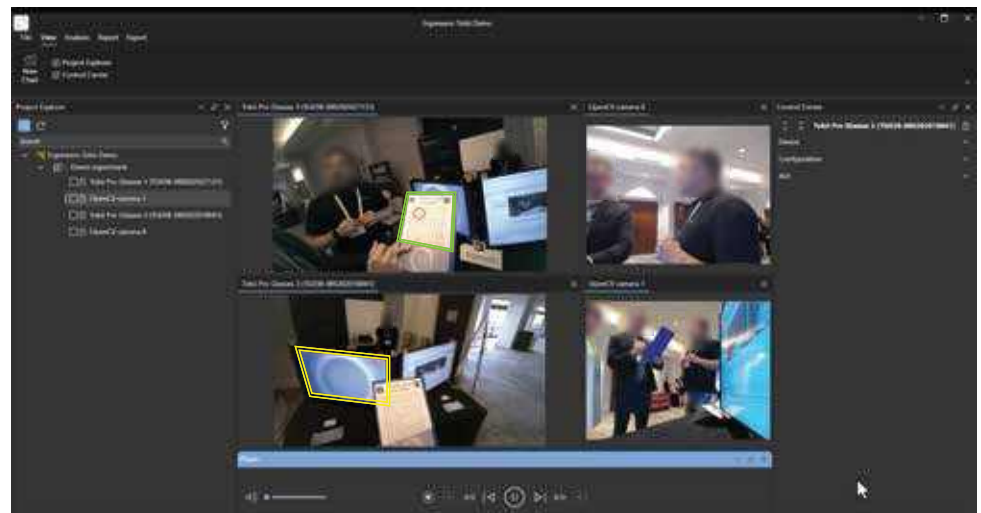
- Synchronizes an unlimited number of simultaneously recorded head-mounted eye trackers<sup>1</sup>
- No Limit of Acquisition Frequency
- Global AOIs enable unified analysis for all subjects
- Automated gaze analysis for static & moving AOIS
- 3D gaze reference (gaze to field-of-view mapping independent from head movement)
- Elaborate Metrics & Gaze Visualisations
- Blink & Eye Closure detection
- Transparent Calculation Methods & Full parameter - adjustability
- Unlimited raw data access & export (coordinates and native image data from eye- and field video)
- Secure, Offline Data Processing
- End to End Solution: From recording to reporting

<sup>1</sup> Currently compatible with Ergoneers Dikablis X, Tobii Glasses III

Take a **closest** look at

1. Fixations and gaze points
2. Static & dynamic video Heatmap
3. Areas of Interest (AOI)
4. Time to First Fixation
5. Time spent (Dwell Time)
6. Attention ratios
7. Fixation sequences
8. Revisits
9. First Fixation Duration
10. Average Fixation Duration
11. Pupil diameter
12. Blinks, Eyelid opening

All Metrics can be calculated in relation to AOIS.



This sample features two Eye Trackers and two Webcams



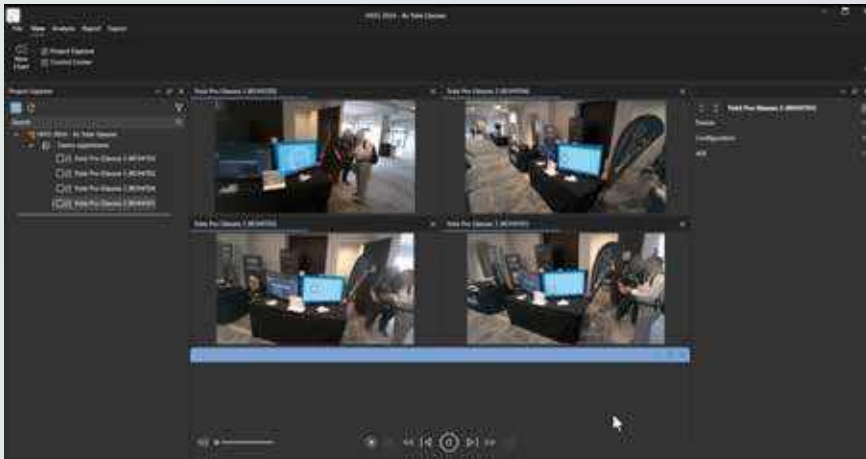
Prophea<sup>Autorecog</sup> detects AOIS and pre-defined objects automatically using AI powered image recognition.



Prophea<sup>Data Engine</sup> enables Multi Modal Connectivity to other biophysical sensors.

# Prophea<sup>eye</sup>

## Multi Eye-Tracking without limits

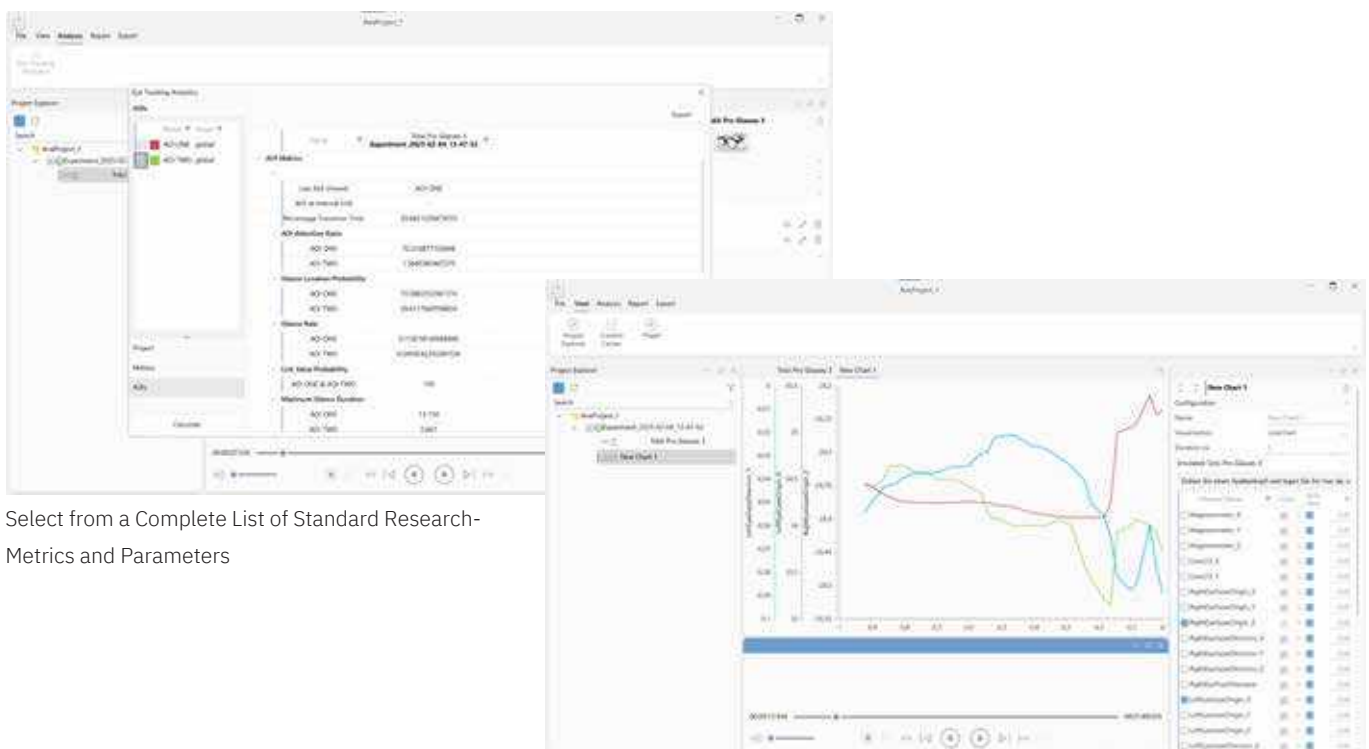


Four Eye-Trackers recorded and analysed using one standard Laptop

Global AOIs - once defined, AOIs are automatically detected by all or selected Eye Trackers.

- Easy to set up  
Integrated Hardware Detection
- Automatically synchronized Eye tracking data from all Subjects
- User Optimized UI  
Flexible / Customizable UI
- Inbound Reporting Tool  
exports Diagrams & Graphs
- Collective workflows empower  
Multiple Users on one License

## The Ultimate End to End Eye-Tracking Suite From recording to reporting



Select from a Complete List of Standard Research-Metrics and Parameters

Transparent and Adjustable Calculation Methods allow  
Deep-Dives into Individualized Analysis-Methodologies

# Prophea<sup>autorecog</sup>



Redefining interaction analysis

## Video-based object recognition

Prophea<sup>autorecog</sup> is Ergoneers' cutting edge AI-module for object and pattern recognition.

Prophea<sup>autorecog</sup> enables an unseen excelleration of insight-generation and imprevd convenience in workflows using Prophea.X analyzing modules that primarily work on images, such as Prophea<sup>eye</sup> or Prophea<sup>video</sup>.

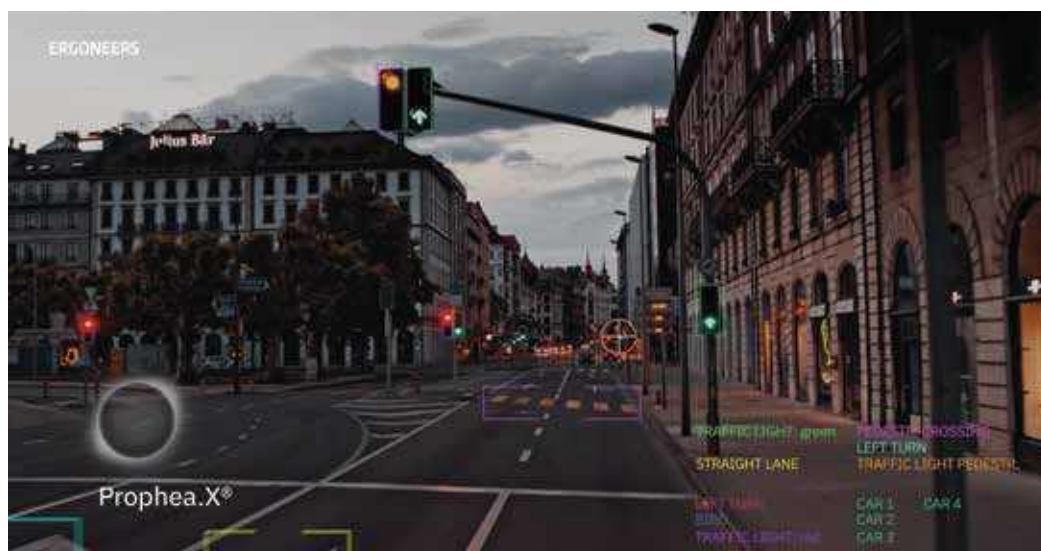
Prophea<sup>autorecog</sup> in combination with Prophea<sup>eye</sup> enables fully automated gaze analyses towards static or moving areas of interest without any manual



Predefine or choose from exisiting presets to automatically detect and track objets as part of your analysis



Lifting Interaction analysis to a whole new level



# Prophea.X

## Prophea.X

Expanding the spheres of behavioral research

Lossless Real-Time  
Recording & Live Monitoring

Any Input Format

Any Number of Subjects

Any Number of Data Streams

Enter a New Era of Flexibility

Full - Scale  
Situation - Analysis

Instant Interaction Analysis

Deeper and Precise Insights

Focus on Creative Tasks

State of the art  
Eye- Tracking

One Workflow

Low Hardware Requirements

Local Data Processing

Save Time and Resources

# Ergoneers ID

Pioneering the forefront of holistic biophysical and environment data fusion, Ergoneers is dedicated to support its client base on their mission to shape a research-based, human-centered future.

Highest Data Quality

Infinite Scalability

Speed & Flexibility

End to End Solutions

Trusted Partners

20 Years of experience

Largest signal scheme available

600+ Publications

Leading Customers

NASA DAIMLER SIEMENS AIRBUS APPLE AUDI  
SPOTIFY BMW P&G GOOGLE MICROSOFT KIA  
VOLKSWAGEN BOSCH HYUNDAI AJAX AMSTER-  
DAM TUM CONTINENTAL FRAUENHOFER GEOR-  
GIA-TECH UNIVERSITY OF IOWA RWTH-AACHEN

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consultation!

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