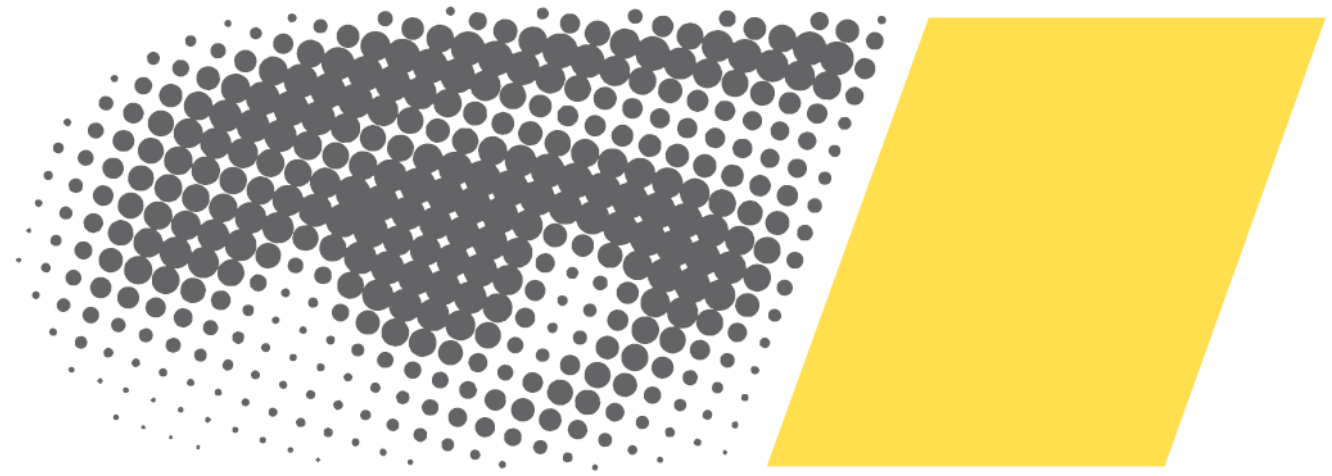


See further
with our
groundbreaking
eye tracking
technology.



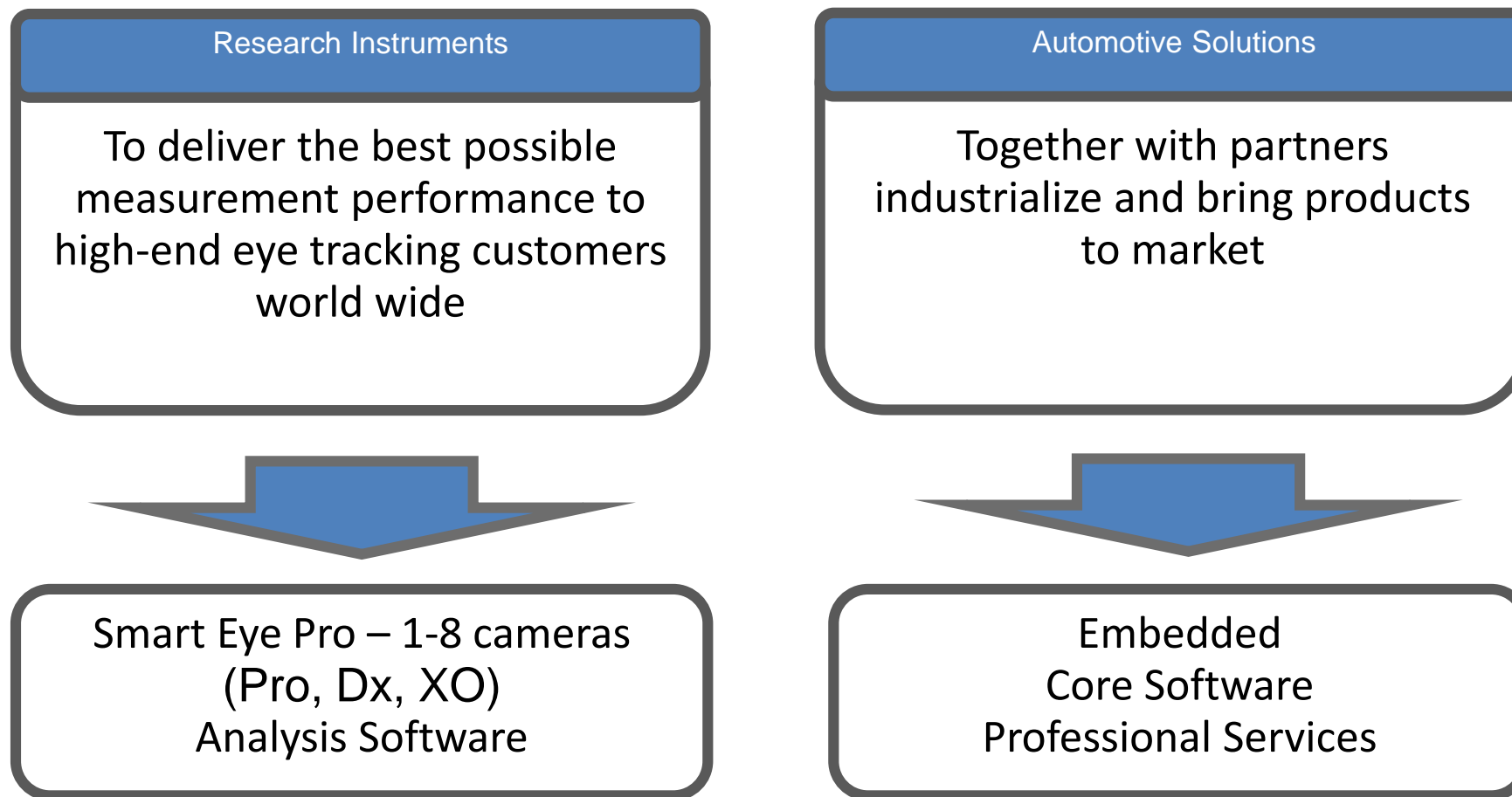
smart eye

This is SMART EYE

- Based in Gothenburg Sweden, with origins from Chalmers Technical University, established 1999
- The company was originally founded to supply the best eye tracking systems on the market to the automotive Industry.
- Over 200 clients and over 500 systems deployed across USA, Canada, Europe and the Asia Pacific Region.
- Today we are the market leader in combined head box, field of view and gaze accuracy for **remote** eye tracking systems.
- 63 Design wins and with production cars

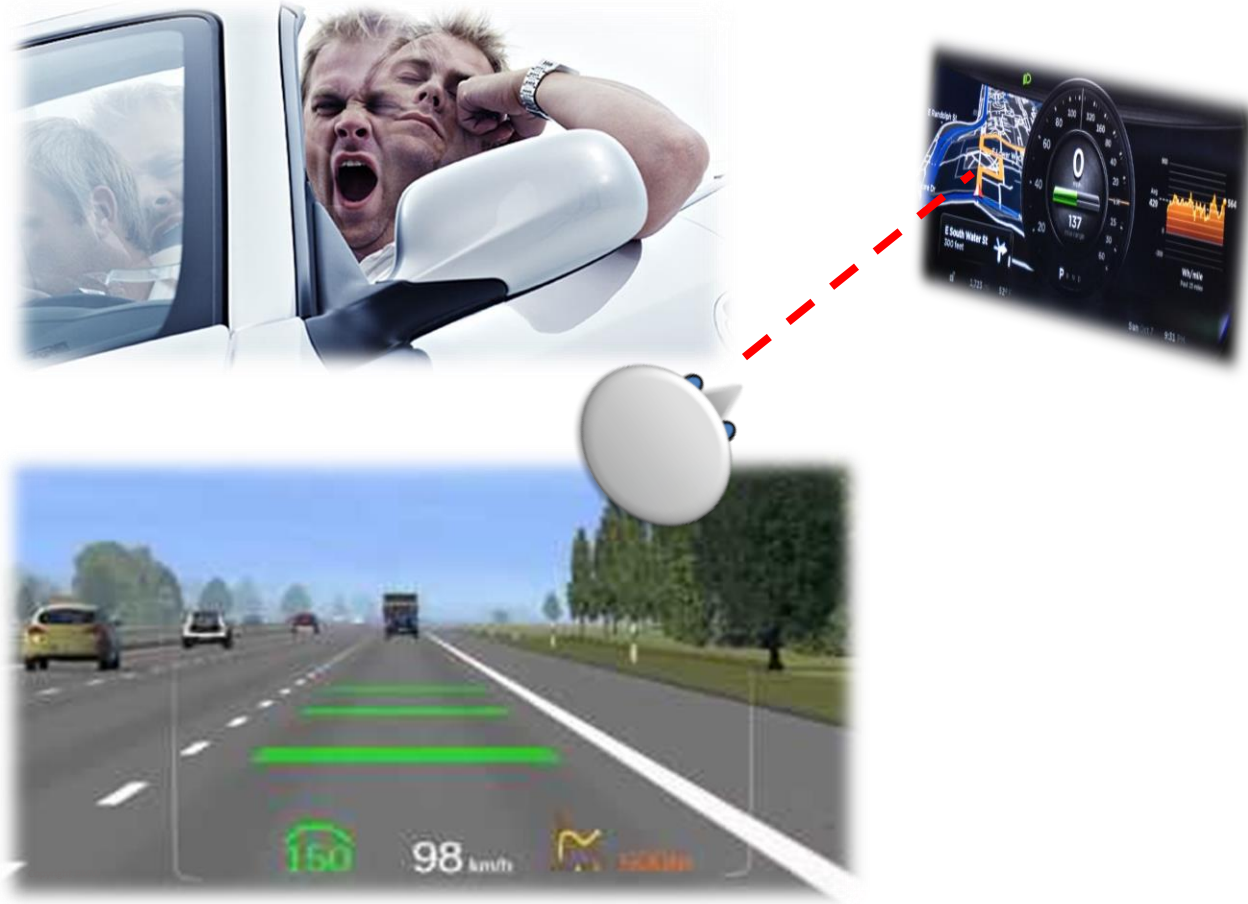
BUSINESS UNITS - From research into production cars

Research Instruments and Automotive Solutions



Production: Enabling new functionality

- Inattention/Drowsiness detection
- Driver-Vehicle Interaction
- Automated Driving support
- Driver health monitoring
- Driver intention prediction
- Advanced display concepts
 - 3D displays
 - HUD with true overlay
- ...



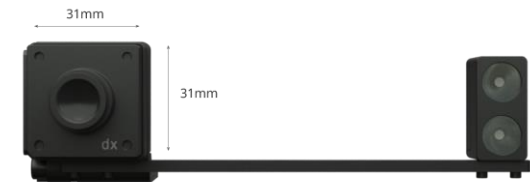
Research

SMART EYE Pro / Pro Dx – Remote Multi-Camera Head and Eye Tracking Systems

- Multi-camera (1-8) systems running on a single PC and on a single algorithm
- Different form factor for being least intrusive in any project
- Offering up to 360 degrees head- and eye tracking
- Free camera placement
- Tracking distance between 30 cm – 3 m
- Best combined head box, field of view and gaze accuracy on the market
- Wealth of 135 head- and eye measurement output variables
- Insensitive to ambient light, making it suitable for projects in all levels of darkness and sunlight
- SMART EYE XO - bar tracker beyond 2D



Smart Eye XO



Latest Smart Eye Pro Dx

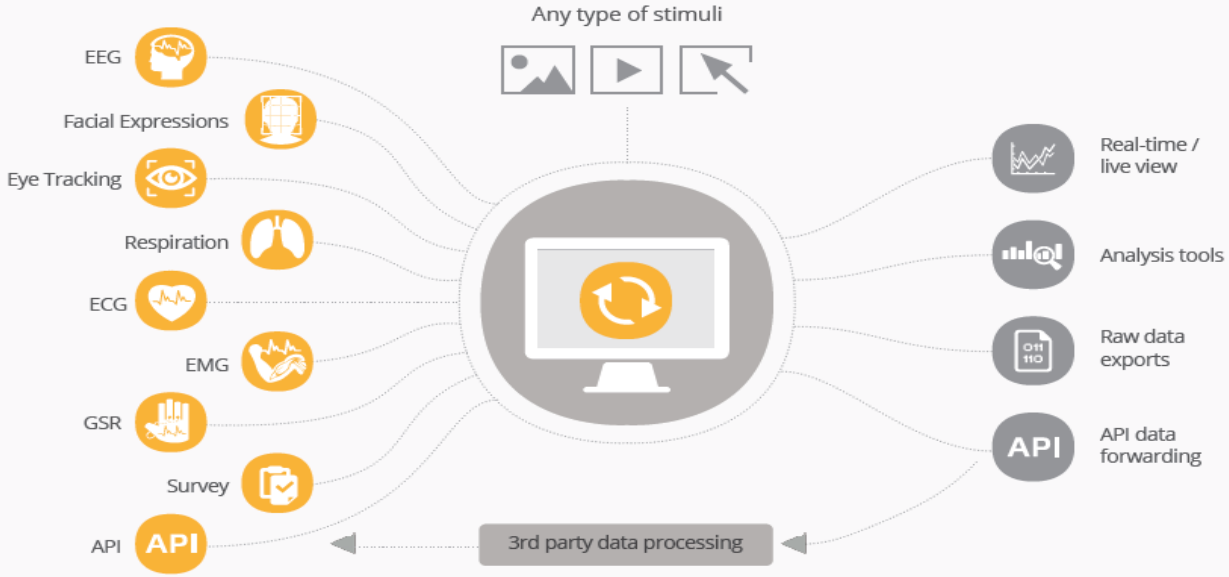
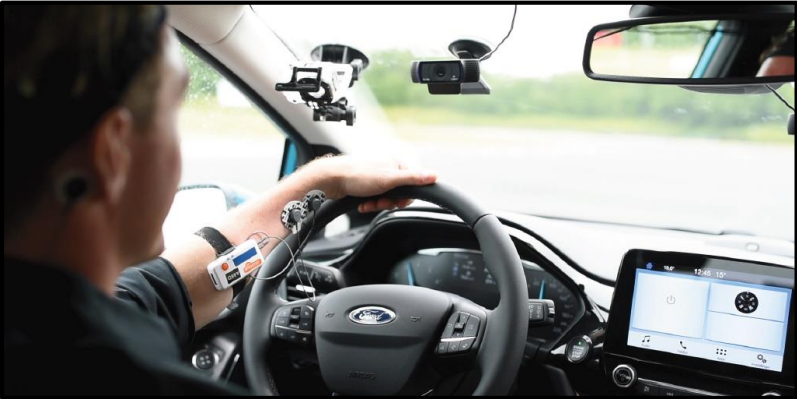


Smart Eye Pro

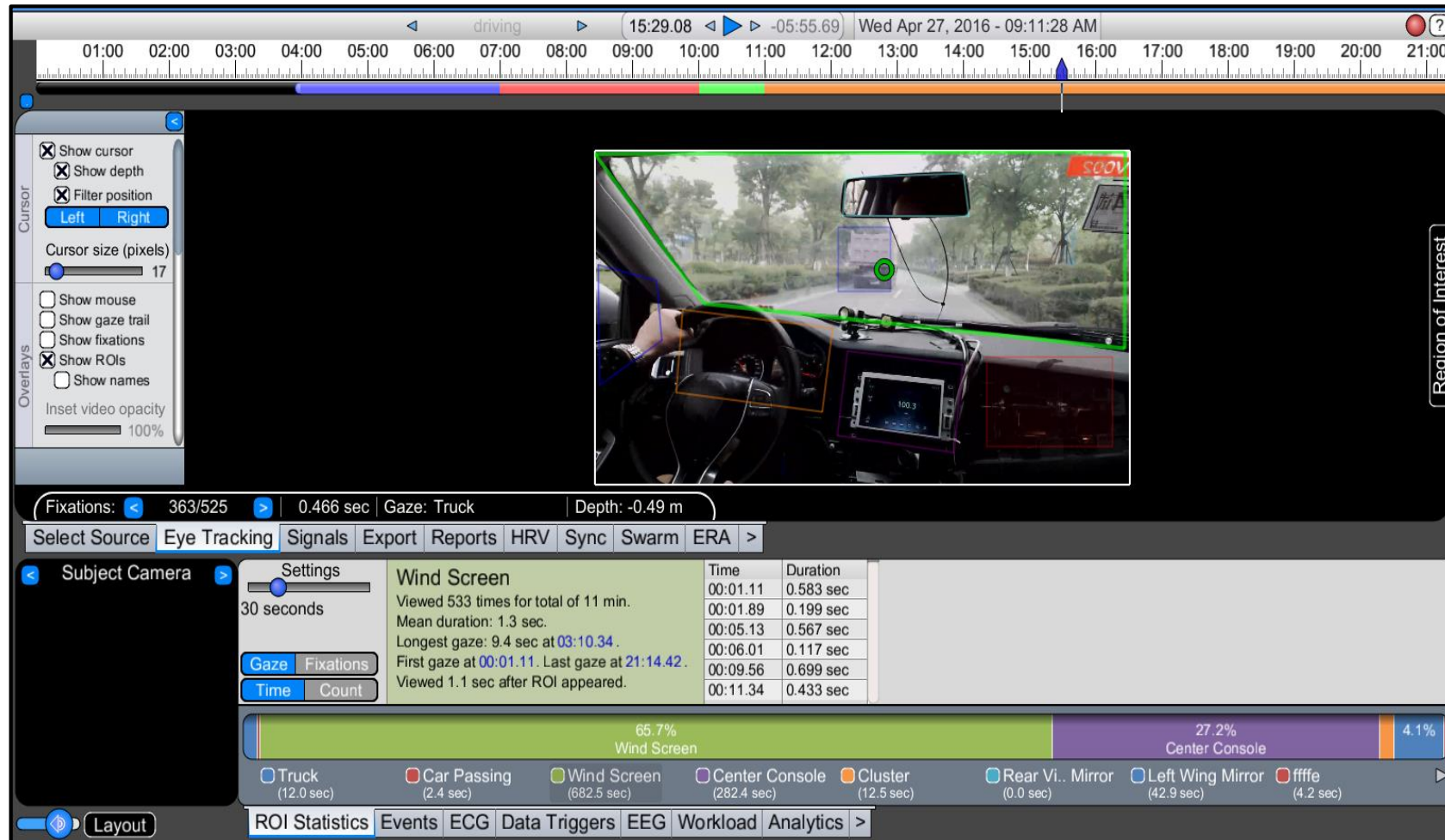
Research: iMotions Software Solutions

Multimodal research in any environment

iMotions reduces the complexity of carrying out multimodal research, enabling a wide array of sensors to be seamlessly connected. By combining these biometric measurements, it's possible to get a better understanding of human thoughts, feelings, and behaviors in any environment.



Research: Scene Camera / ROI Viewing



The screenshot displays the Smart Eye software interface for driving scene analysis. At the top, a timeline shows the recording date and time (Wed Apr 27, 2016 - 09:11:28 AM) and a color-coded progress bar. The central video window shows a first-person view from the driver's perspective, with various regions of interest (ROIs) outlined in different colors (green, blue, orange, red) and a green fixation point. A 'Region of Interest' label is visible on the right side of the video window.

On the left side, there are control panels for 'Cursor' and 'Overlays'. The 'Cursor' panel includes options for 'Show cursor', 'Show depth', and 'Filter position', along with 'Left' and 'Right' buttons and a 'Cursor size (pixels)' slider set to 17. The 'Overlays' panel includes options for 'Show mouse', 'Show gaze trail', 'Show fixations', 'Show ROIs', and 'Show names', along with an 'Inset video opacity' slider set to 100%.

Below the video window, a status bar displays 'Fixations: 363/525', '0.466 sec', 'Gaze: Truck', and 'Depth: -0.49 m'. Below this is a navigation menu with options: 'Select Source', 'Eye Tracking', 'Signals', 'Export', 'Reports', 'HRV', 'Sync', 'Swarm', and 'ERA'.

The bottom section features a 'Subject Camera' panel with a 'Settings' slider set to 30 seconds. To its right is a table for 'Wind Screen' statistics:

Time	Duration
00:01.11	0.583 sec
00:01.89	0.199 sec
00:05.13	0.567 sec
00:06.01	0.117 sec
00:09.56	0.699 sec
00:11.34	0.433 sec

Below the table is a horizontal bar chart showing the percentage of time spent on different ROIs: Wind Screen (65.7%), Center Console (27.2%), and fffff (4.1%). At the bottom, there is a legend for various ROIs: Truck (12.0 sec), Car Passing (2.4 sec), Wind Screen (682.5 sec), Center Console (282.4 sec), Cluster (12.5 sec), Rear Vi.. Mirror (0.0 sec), Left Wing Mirror (42.9 sec), and fffff (4.2 sec). The bottom navigation bar includes options: 'Layout', 'ROI Statistics', 'Events', 'ECG', 'Data Triggers', 'EEG', 'Workload', and 'Analytics'.

Research case: Automotive research at VTI Sweden



Production: Case from OEM production program

Camera and illumination on steering wheel column



Example with camera on steering column (with SOP Q1 2019)

Head & Eye tracking

Automotive – From research into production cars



The challenge to track all of the population

Thank you for your
time!

