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# observED

## Tremend Proctoring Platform

500 | Technology Fast 500 2019 EMEA WINNER Deloitte.

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# What is observED

## The Ultimate Proctoring Tool for Learning Institutions

**observED** is a top proctoring platform with out of the box integration with Moodle.

**observED** enables educators and learning institutions to stay in control of their online classes and exams by remotely keeping a close eye on the students.

This multimodal solution allows institutions to maintain their institutional integrity and prevent students from cheating at the exams, allowing for safe operation of an online course with examinations.

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# Typing DNA

## Identify and authenticate people using the biometric fingerprint of one's typing style

**TypingDNA** uses predictive analysis to record keystroke dynamics statistics about the keys a user presses and turning them into typing patterns.

This modern keystrokes dynamics API can be used by developers to secure their apps, educational institutions to identify the students at exams and companies during the onboarding process.

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# ObservED

## Tremend Proctoring Platform

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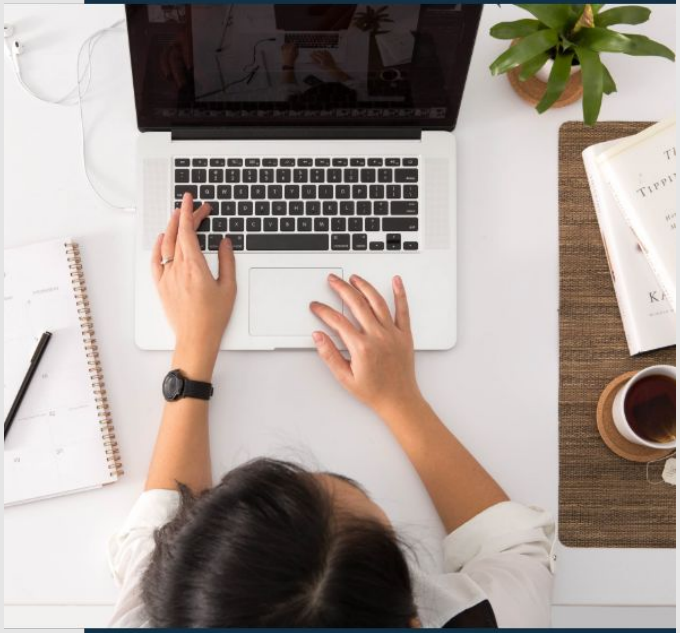

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## AI Powered

**Keystrokes Dynamics** using TypingDNA
Predictive analysis to record keystroke dynamics statistics about the keys a user presses and turning them into typing patterns.

**Behavioural analysis**
Based on the telemetry data captured during the exam, **observED** compiles a coefficient of the student's academic integrity.

### How it works?

- ✓ The student starts the online exam, as usual;
- ✓ At random intervals, a popup with a typing verification is required.
- ✓ Also at random intervals, telemetry referring to the student's behaviour is gathered and sent to ObservED platform for analysis.

### Integration capabilities

- Out of the box plugin for Moodle LMS, installable from Site Administration.
- API-Based integration with custom LMS'

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## eLearning Expertise

### eLearning & collaboration platforms

- Off-the-shelf or custom LMS solutions
- Platforms: Moodle, Drupal, Joomla, Dokeos, Docebo
- ”Headless” agile eTraining module - integrated in customer systems
- Development, customization, deployment, maintenance
- Operation, devops/cloud hosting: AWS, Google, Azure

### Multimedia eLearning courses

- Interactive courses, manuals, eBooks, games, 3D simulations, VR, AR, Learning Bots
- Instructional Design
- Development, customization, localization, maintenance

### Consultancy

- deploying training and knowledge building environments
- Integration of complex end-to-end eLearning solutions, including building blocks COTS or custom

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# Moodle LMS

## Expertise and best practices

Moodle is the world's most popular open source Learning Management System, with more than 100 million users all over the world and sustained by a strong community of partners and independent developers.

We are strong believers in **open source**. This is just one of the reasons for choosing Moodle as our main tool for enterprise eLearning platforms.

## Our Services:

- Development and customization
- Theming
- Custom installation, configuration and monitoring
- Upgrades/migration
- Operation, devops/cloud hosting

## Some of the reasons why we support Moodle

- Easy management of courses, students, trainers, learning paths, assessments & certifications
- Improved multilingual and globalization support to deliver great digital experiences
- Manages a wide range of resources, from .ppt, .jpg or .pdf files, to access to YouTube videos that could be part of an informal training and advanced SCORM courses.
- Manages courses catalogue, repository for content, certification, learning plans, notification system, global search
- Apps for both Desktop and Mobile App
- Can be tailored to suit needs through customizations
- APIs that allow integration with third-party applications
- Standardized
- Responsive

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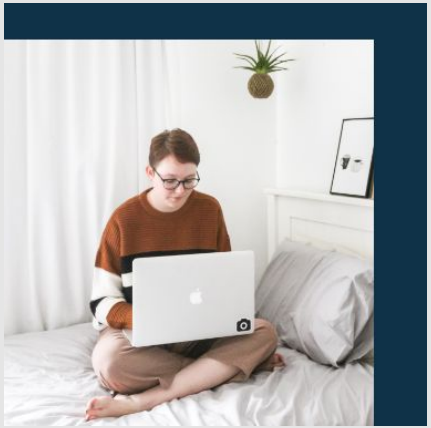
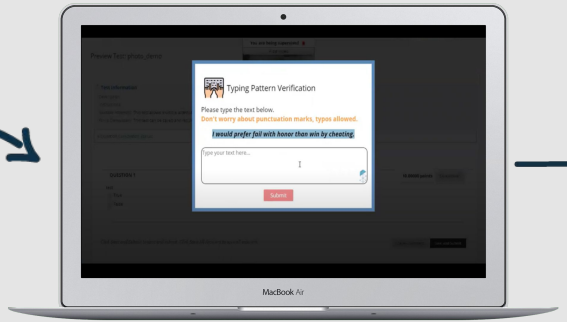
# The Process

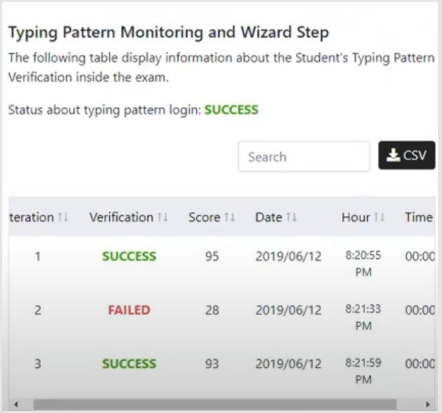
Here's the actual process of how observED functions



We connect to each student through TypingDNA's API




We require the student to verify his/her own identity by typing a certain text at random intervals




We display the results of each typing interaction

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# How does it work?

A simple 3-step process:

01. **Step 1: Typing Pattern Monitoring**
observED verifies the typing pattern of each student using TypingDNA's AI-based algorithm.
This process is based on advanced biometrics keystroke dynamics and can be customized for each individual user.

02. **Step 2: Browser Activity**
The tool looks at the actions the users performs on his browser client and ensures that no suspicious activity was performed (browser tab switching, copy pasting)

03. **Step 3: Camera Snapshots**
observED takes camera snapshots at random intervals to verify that the person sitting in front of the computer is the student, and not someone else.

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# Why do you need it?

## Understanding the growth of the proctoring market

The global proctoring market is growing at an astounding pace in 2020, being driven mostly by the COVID-19 lockdown. An increasing number of companies, universities, government entities or certification programs are now using proctoring services to deter cheating during student examinations or verify identity during employee assessment.

**Online proctoring tools,** such as observED, use advanced algorithms and machine learning software to prevent cheating by trying to identify unnatural behavior. Students are tested and monitored continuously, suspicious behavior being flagged for administrative review.

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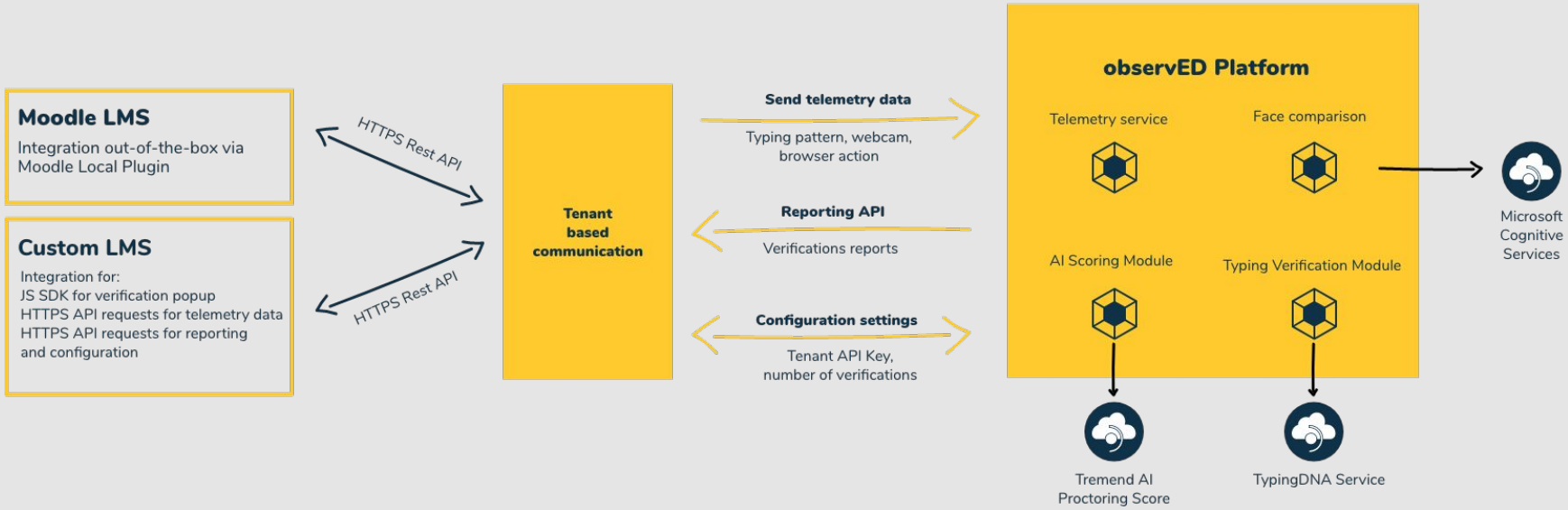
# Why do you need it?




High-level architecture describing the API communication as well as modules and 3rd party service integrations

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# Why Choose ObservEd?

Explore some of the reasons why you should use our tool for your exam monitoring needs

Prevent dishonest behavior and protect your credibility as an institution

Stay in full control over the entire process using the built-in manager API

Save money in the process by not having to invest in costly physical infrastructure

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# Driving agility into high complexity projects

**15+**
years of software engineering

**800+**
projects delivered

**20**
countries on 4 continents

**500+**
software engineers

500 Technology Fast 500 2019 EMEA WINNER

IMPACT STAR Award by Deloitte. Technology FAST 50 CENTRAL EUROPE 2020

Inc. 5000

FT 1000 Europe's Fastest Growing Companies

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Fastest growing tech company in Romania by Deloitte Fast 50

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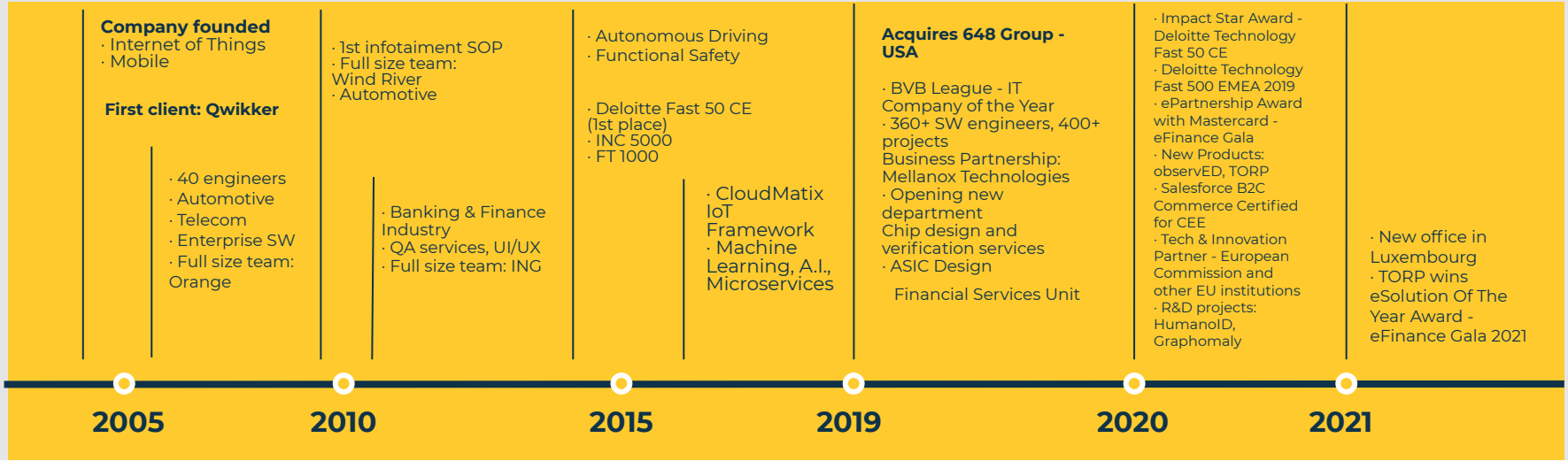
# Tremend History




Qwikker orange exia ING Actility Braeburn Mellanox Bright Kids WIND

rainmachine F64 CloudMatix BLUE DANUBE NETFLIX HotNews.ro WorthPoint RIGHTSFLOW Carrefour COATS

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Fastest growing tech company in Romania by Deloitte Fast 50

# Trusted partner in delivery and innovation for Fortune 500 Companies

60+ million people use solutions built by Tremend

4 banks, 2 Telecom, 5 Car manufacturers chose Tremend

Worldwide and regional firsts in eCommerce, Automotive and IoT

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Fastest growing tech company in Romania by Deloitte Fast 50

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# High complexity software solutions

## Agile Transformation

Build robust, scalable platforms for enterprise applications.

deploying training and knowledge building environments
Omnichannel Customer Experience
Microservices & Cloud
Enterprise Content Management
eCommerce & Marketplaces

## Advanced Engineering

Experts in embedded,automotive, networking and IoT software

IoT - End-to-end
Infotainment
ASIC design & Firmware
ADAS & Functional Safety

## Emerging Technologies

Bring practical uses of new technology to our customers

Machine Learning & AI
Anomaly Detection
Blockchain
RPA

Telecom ○ eLearning ○ Financial Services ○ Automotive ○ Retail ○ Manufacturing

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# Contact us to learn more about ObservED

We're always happy to talk!

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