



## Face Recognition Software Solutions

# Introduction

## Swiftly and effortlessly upgrade your business with facial recognition enhanced security

FaceMatrix is an out-of-the-box security and access control solution. It enables identity verification, attendance management, and access control through facial recognition, with real-time monitoring and alerts. Additionally, it can identify and track a person's movements using facial images or physical attributes. FaceMatrix Security enables easier and more effective smart security management.

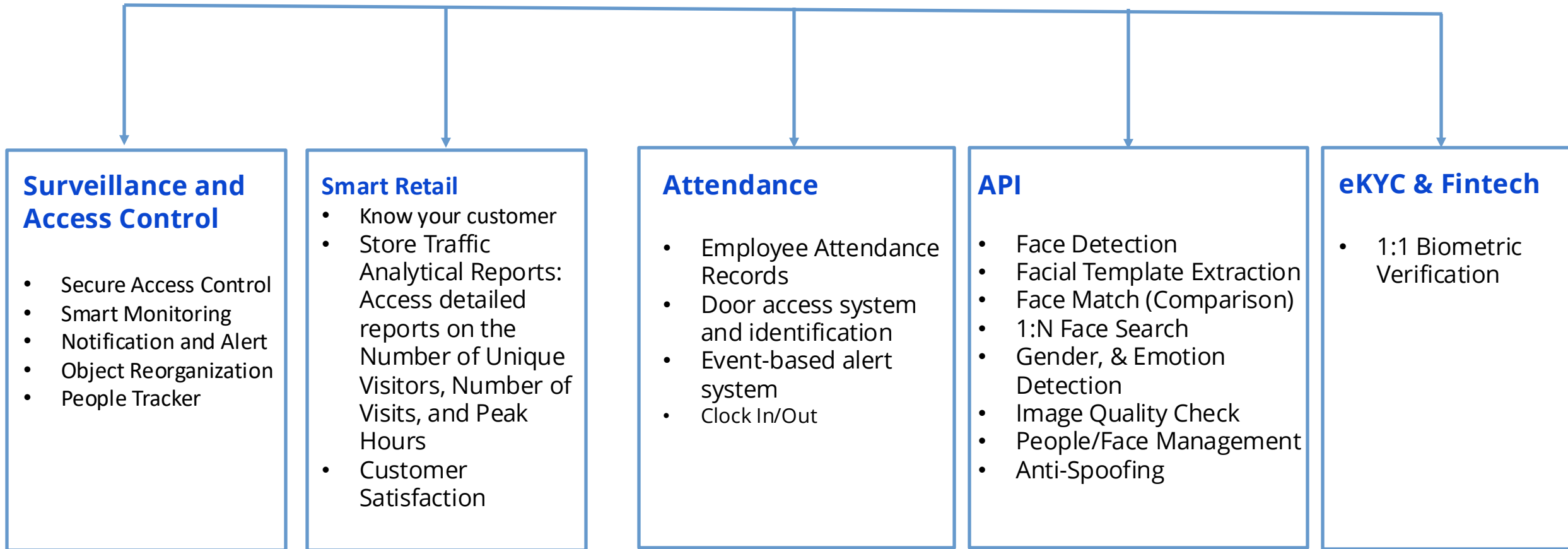
Secure Access  
Control

AI Smart  
Monitoring

Notifications &  
Alerts

Feature Add-Ons

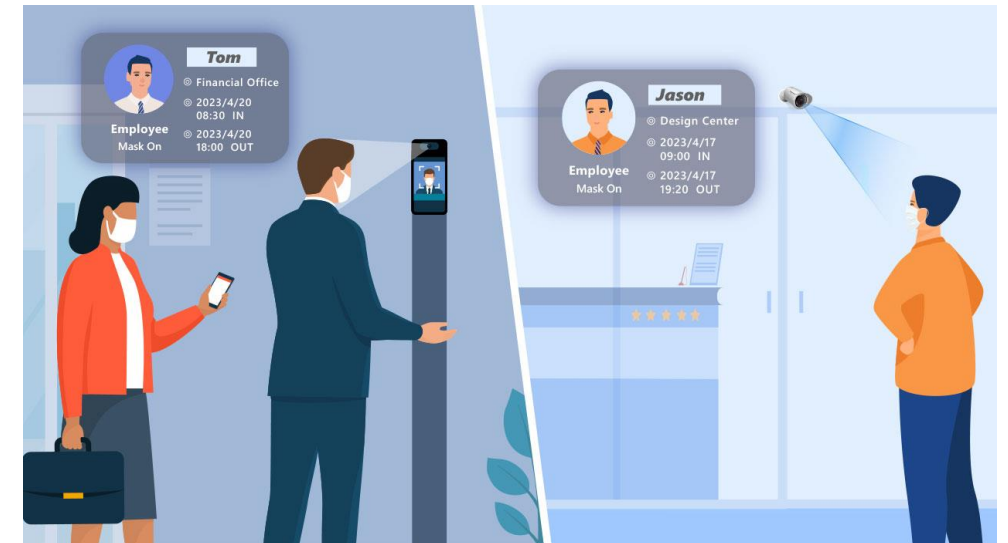
# FACEMATRIX



# Surveillance and Access Control

## Secure Access Control

- Personnel access control, record keeping, and database group management
- Face-based access control through integrated VMS
- Supports Wiegand access control system protocol
- Integrated with automatic door switch DIDO I/O controller
- Supports both IP cameras and face recognition terminals (FaceMe SDK integrated) to meet different environments



# Surveillance and Access Control

## AI Smart Monitoring

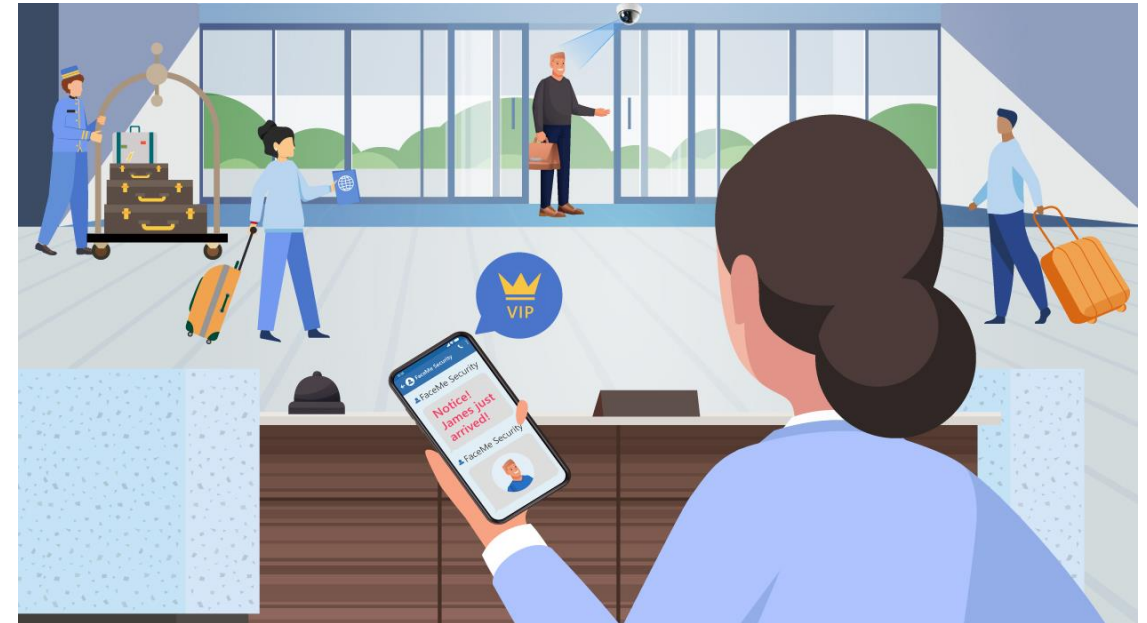
- Multi-channel real-time personnel recognition
- Blocklist detection & notification
- Search recorded videos by face, group, and location filters
- Multi-channel live monitoring (VMR)



# Surveillance and Access Control

## Notifications & Alerts

- Customizable employee groups for access control (i.e. IT, HR, RD, Sales, etc.)
- Instant alert of VIP, blocklisted people, and strangers to the management console, email, or smartphones
- Notification API provided for integration with 3rd party SMS communication software
- Exclusive CyberLink U Messenger notifications already enabled (no integration required) providing name, location, date/time stamp, and captured video of person



# Surveillance and Access Control

## Masks & Protective Gear

- Highly accurate facial recognition even when face masks or other protective gear is worn
- Multi-person dynamic identification



# Surveillance and Access Control

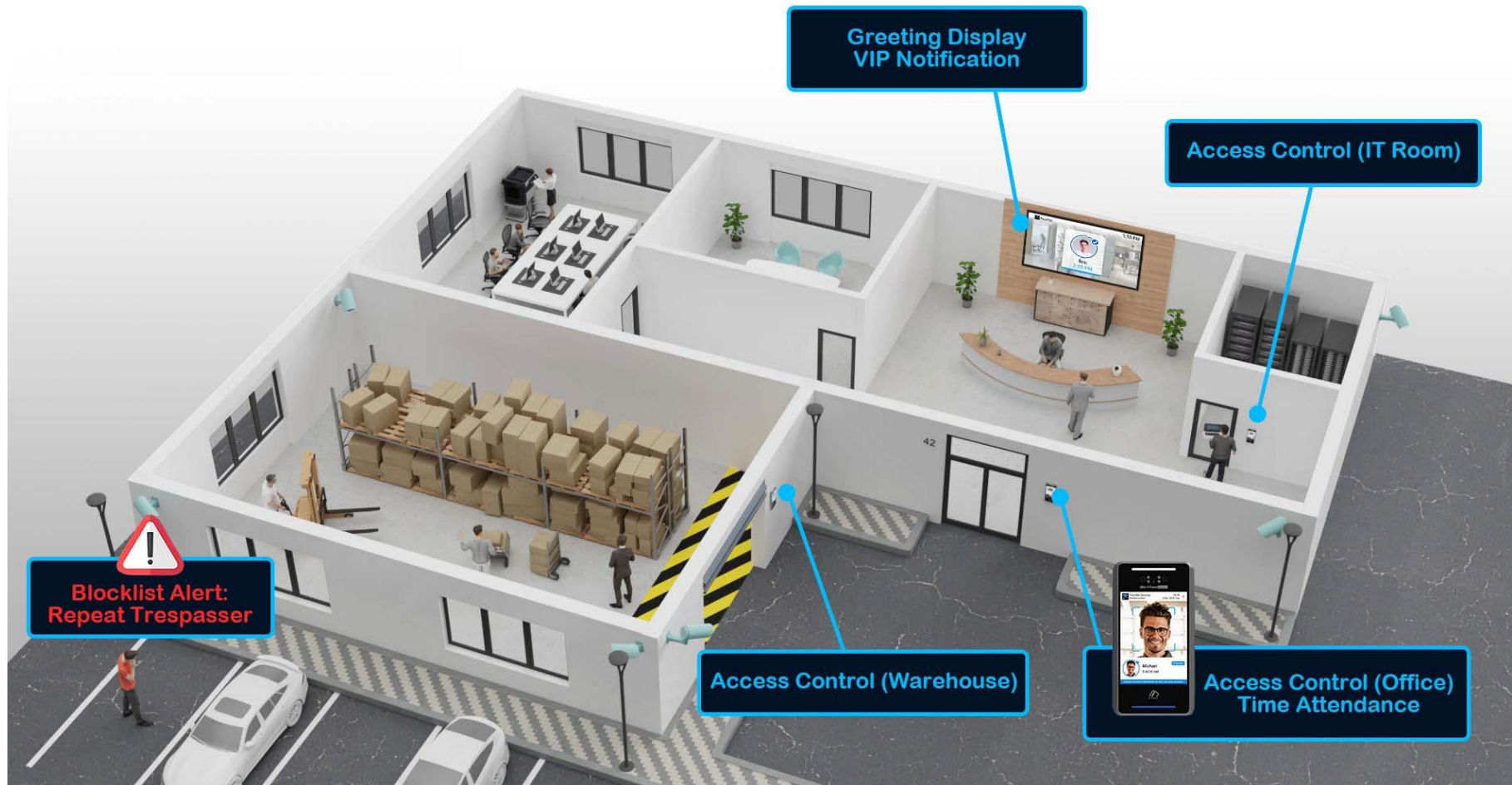
## People Tracker

- Expedite video surveillance investigations with powerful AI
- Track people of interest using physical attributes (age, gender, clothing color, and more)
- Re-Identify people of interest across multiple cameras and locations





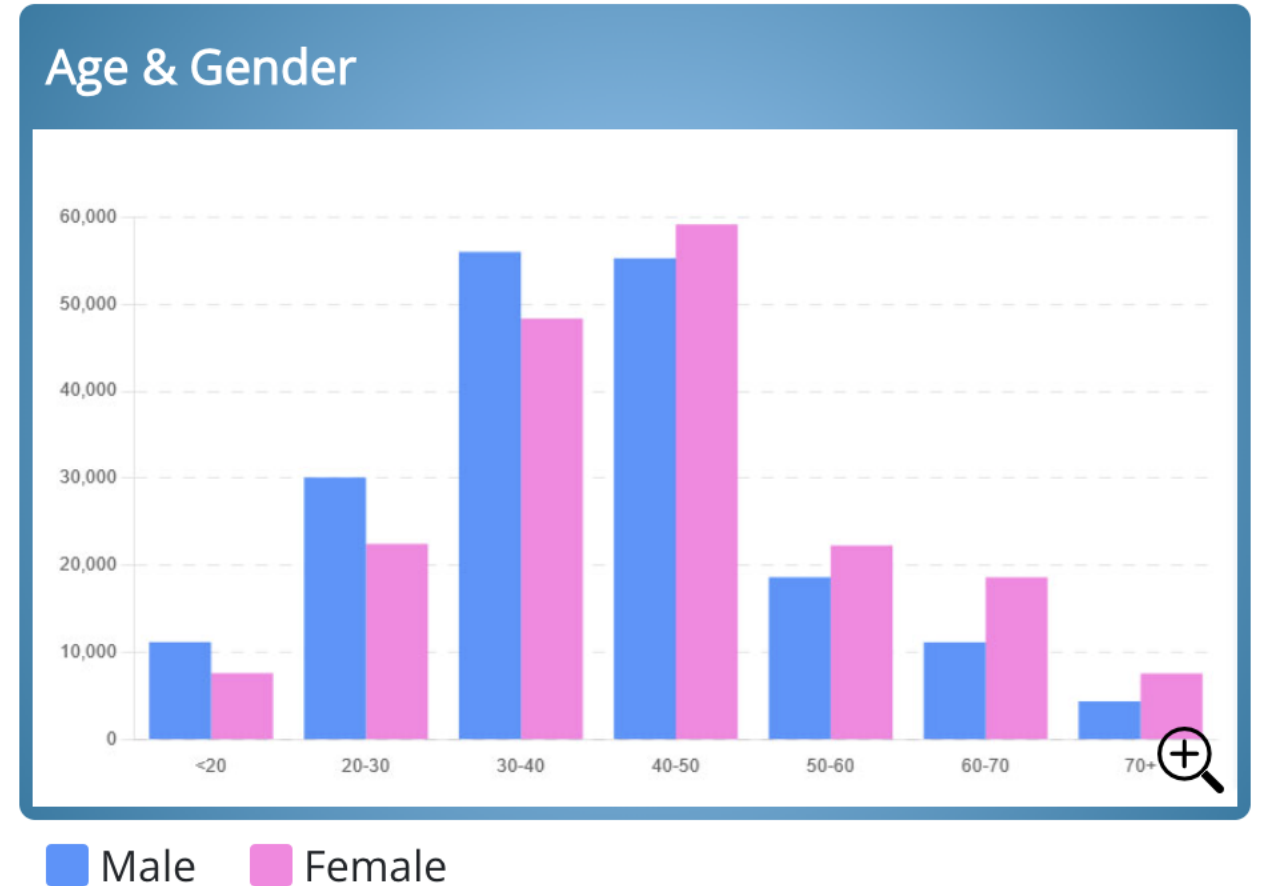
# Use Case



# Smart Retail (Know your customer)

## Customer Demographics: Age Group & Gender

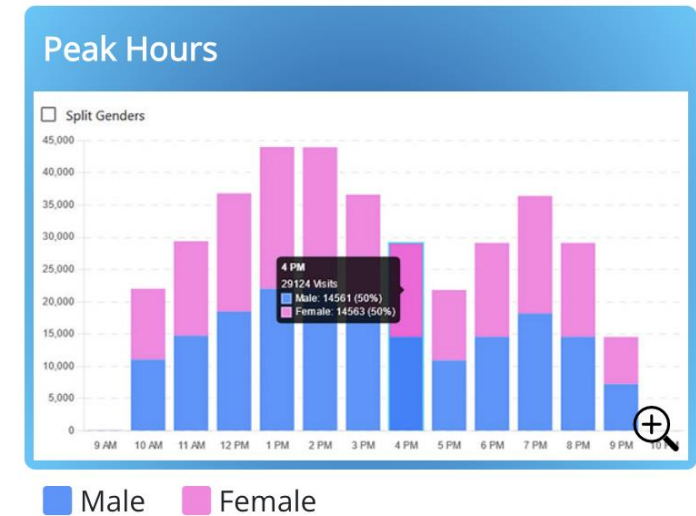
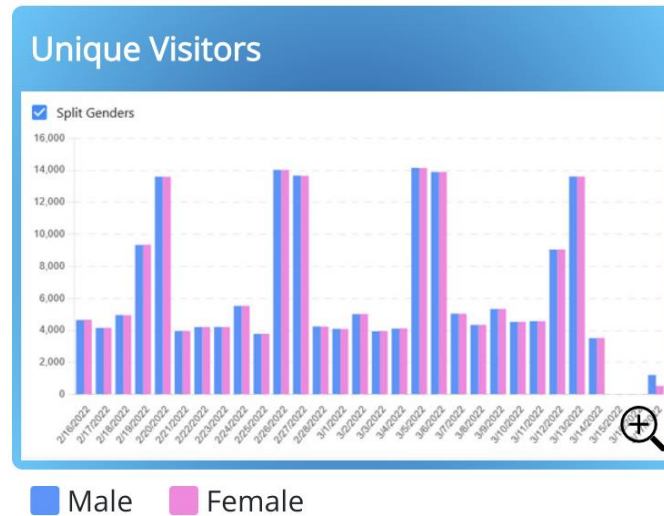
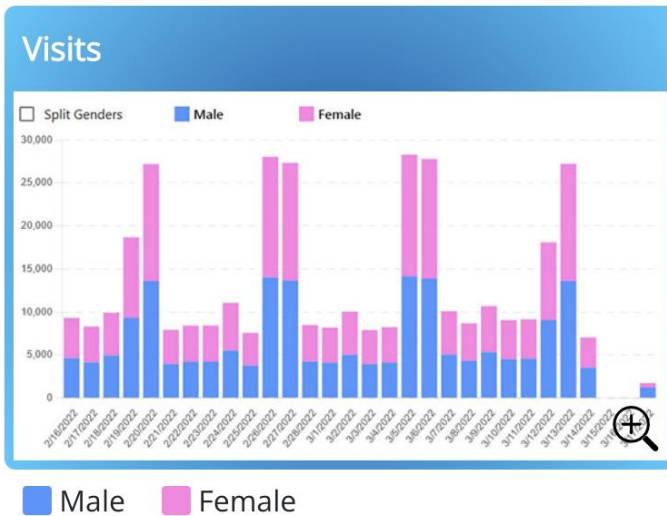
Displays customer data by age group and gender: a valuable insight for store owners, marketers, product developers, and vendors.



# Smart Retail (Store Traffic Analytical Reports)

Store Traffic Analytical Reports: Access detailed reports on the Number of Unique Visitors, Number of Visits, and Peak Hours

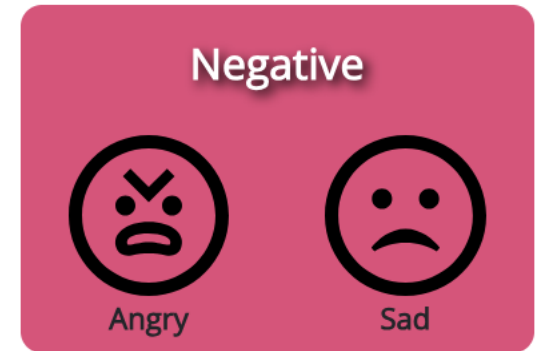
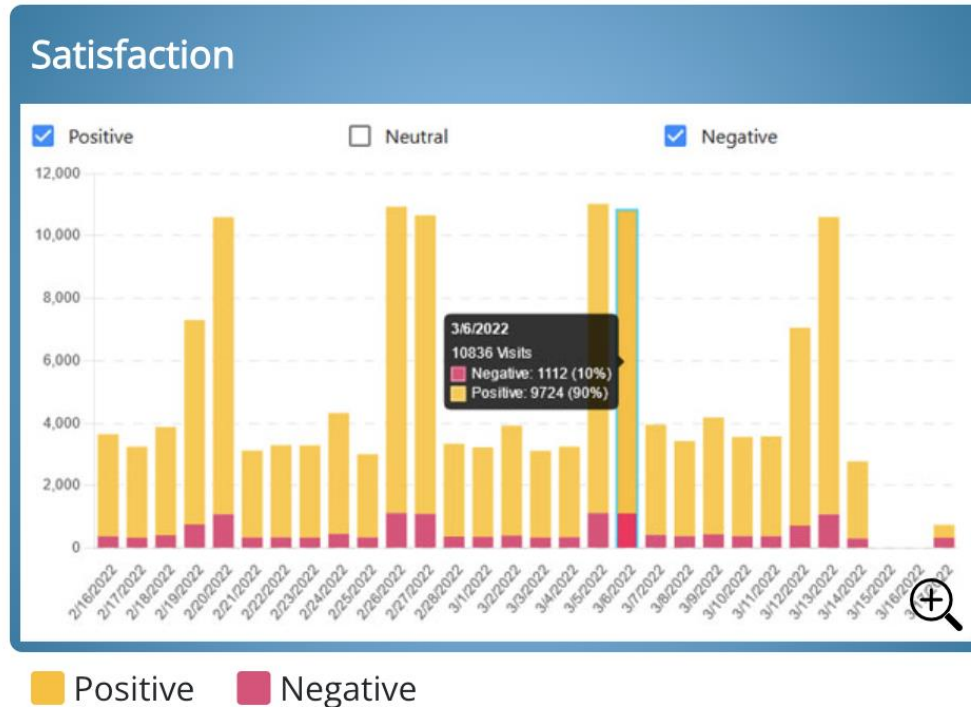
- Retail provides an array of reports: the total number of visits, unique visitors, and peak hours – at all stores or just a specific location.



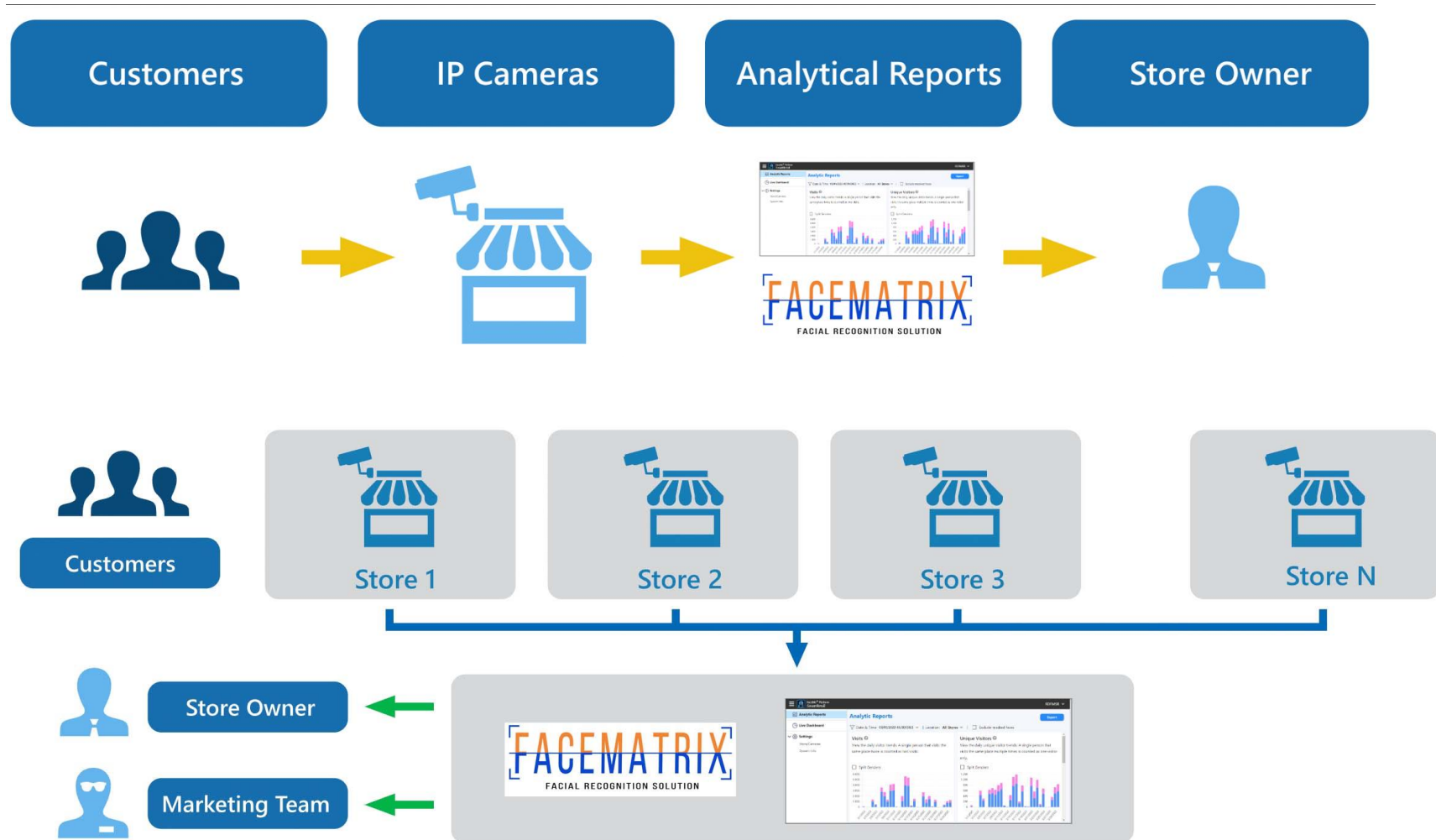
# Smart Retail (Customer Satisfaction)

## Customer Satisfaction

- Analyses customers' facial expressions to gauge overall satisfaction levels.



# Use case



# Attendance

## Employee Attendance Records


View a specific employee's attendance record.

Monthly Report		Daily Report	
2022	Department: All	Status: All	
Department		Clock-out	Hours worked
RD		20:39:55	11.51
QA		19:51:22	9.88
Design Center		20:21:59	10.49
RD		18:02:11	9.33
SALES		19:11:46	9.44
HR		20:22:39	10.72
RD	08:32:28	19:05:24	10.55
RD	08:11:45	18:11:11	10.54

**ATTENDANCE STATUS:**

- ☒ All
- ☒ Fully Present
- ☒ Absent
- ☒ Late
- ☒ Left Early
- ☒ Late & Left Early

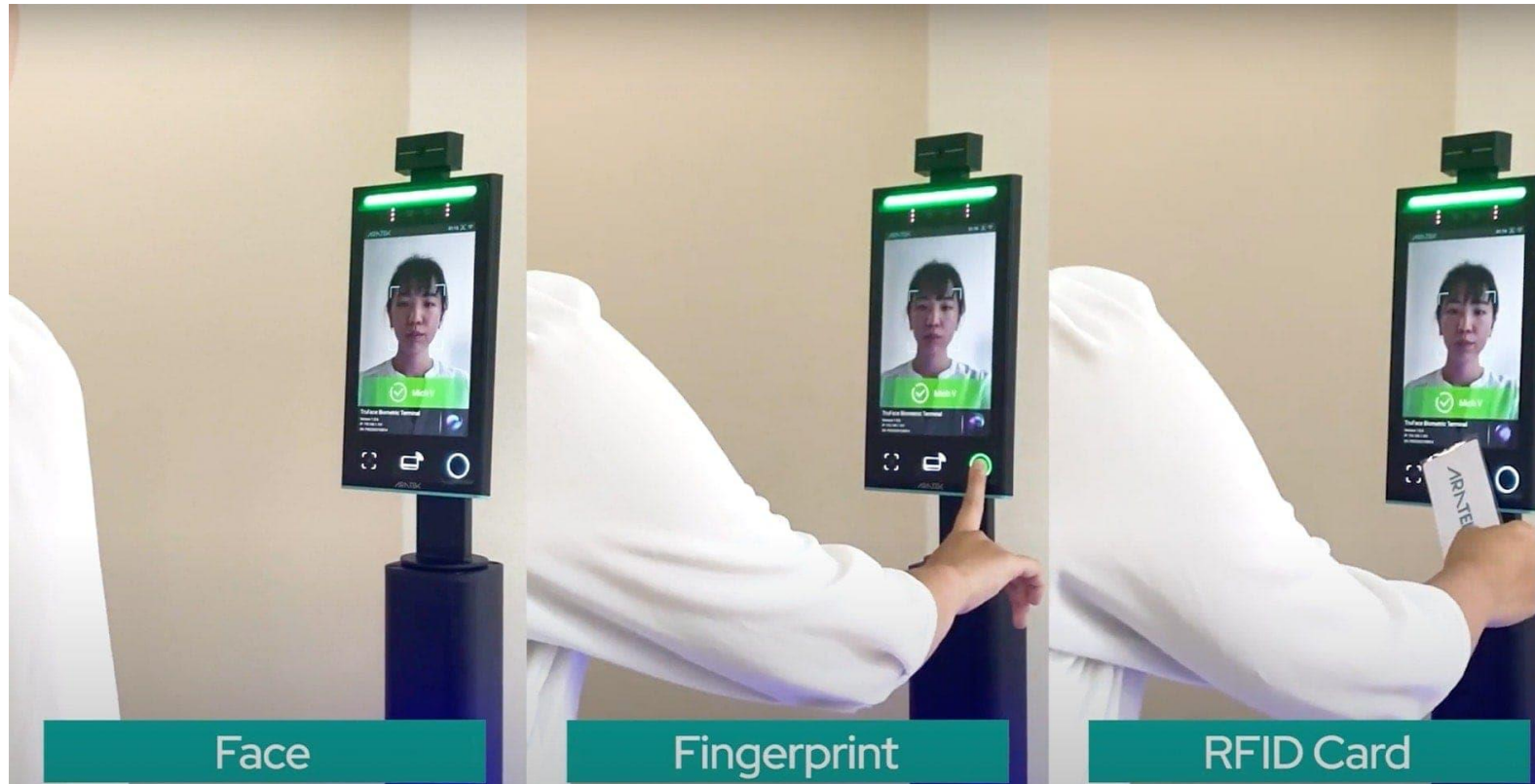
**Apply**

	Normal <b>21 Days</b>	Absent <b>0 Days</b>	Late or Left Early <b>2 Days</b>	Average Working Hours <b>9.18 Hours</b>
SUN	MON	TUE	WED	THU
		03/01 ✓	03/02 ✓	03/03 ✓
03/06	03/07 ✓	03/08 ✓	03/09 Left Early	03/10 ✓
03/13	03/14 ✓	03/15 Left Early	03/16 ✓	03/17 ✓
03/20	03/21 ✓	03/22 ✓	03/23 ✓	03/24 ✓



# Attendance

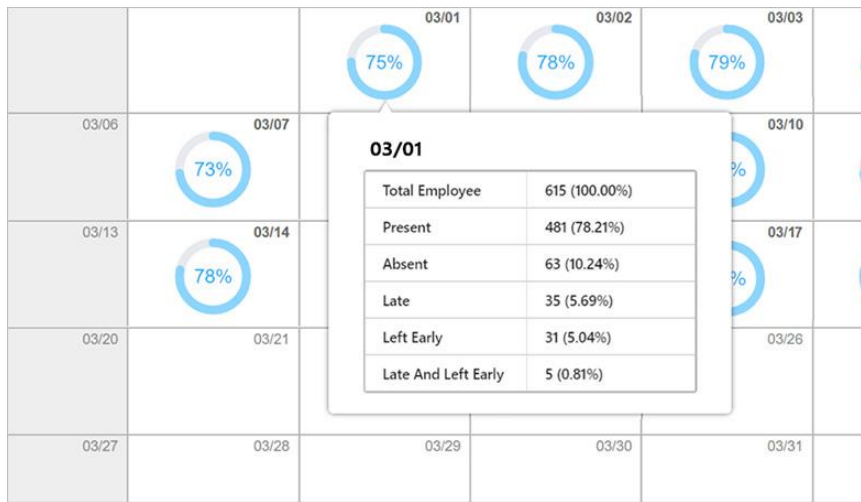
Door access system and identification



# Attendance

## Clock-In/Out

- View the summary for the overall attendance rate of the entire company.



End their work. Here you can view the workforce reports and export them for backup purpose or further analysis. [Export to File](#)

Daily Report

Number of employees: 615 Working hours: 09:00 - 18:00

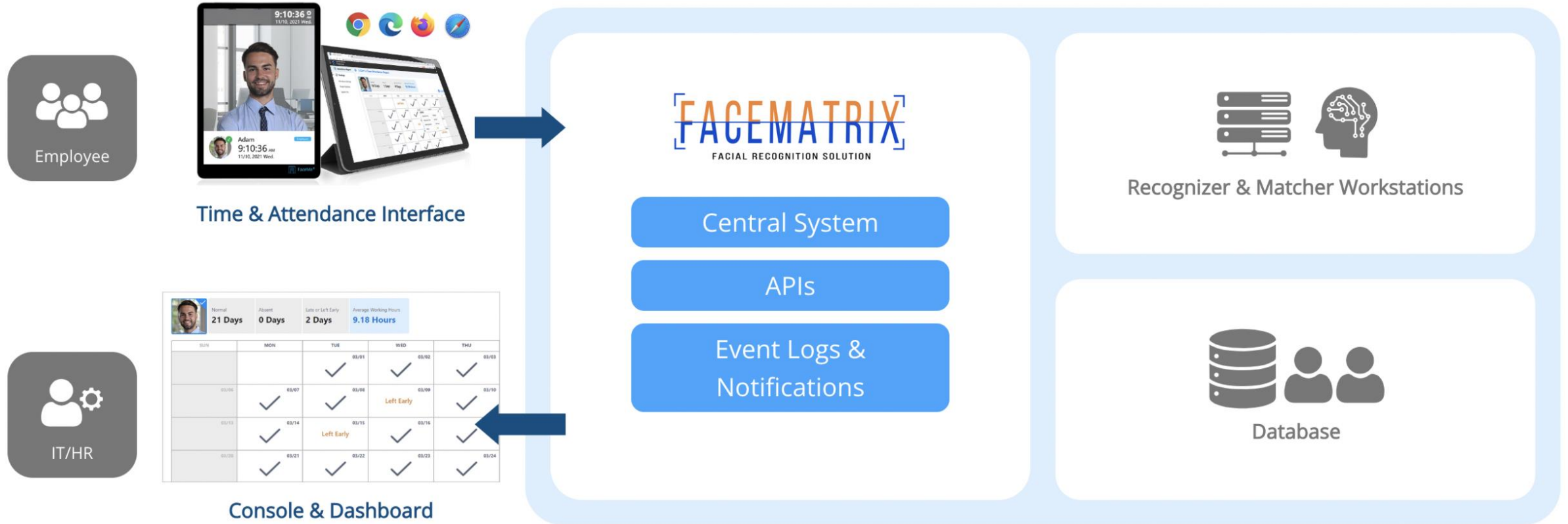
Status: All Rows per page: 50 Page: 1 - 13

	Clock-in	Clock-out	Hours worked	Status
	09:10:39	19:13:58	10.06	Fully Present
	09:58:50	18:15:49	8.28	Fully Present
	09:52:38	19:05:33	9.22	Fully Present
	07:53:38	18:39:15	10.76	Fully Present





# Attendance



# API

FaceMatrix Platform is an easy-to-use solution built to meet the needs of developers.

FaceMatrix consists of Central server (console), API's, and system services, such as event logs and notifications. Through API's it can enable services – such as 2-factor authentication – on any device with a web browser. Furthermore with support for Docker, developers can streamline installation and deployment of FaceMatrix Platform.

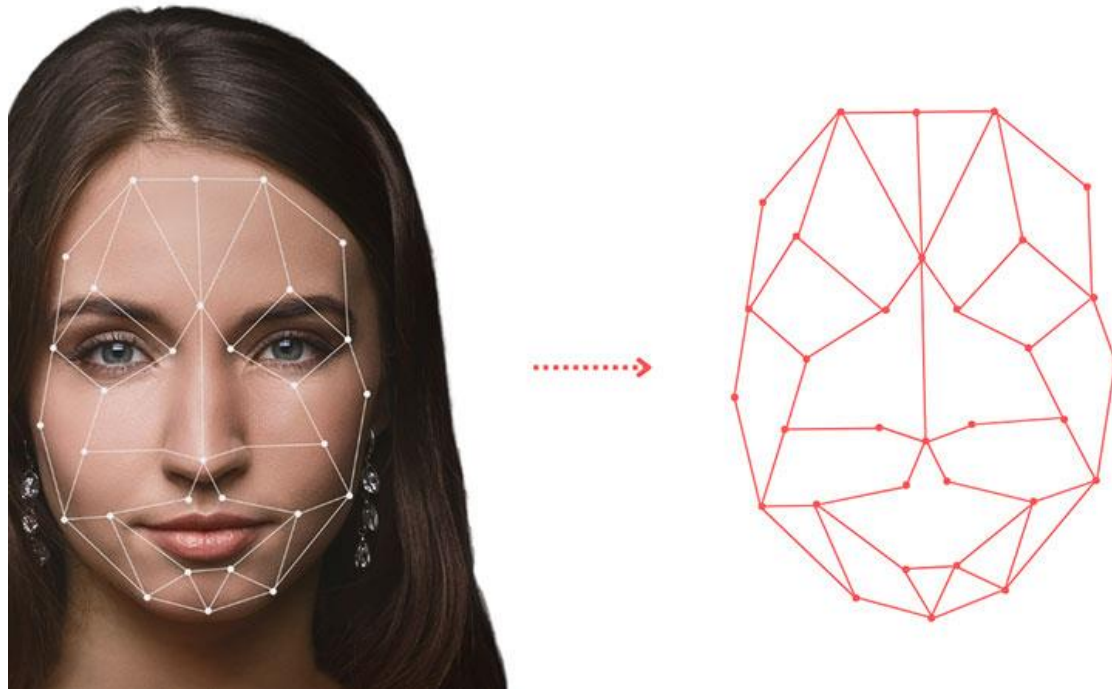
# API(Face Detection)

Platform reliably provides face detection in milliseconds, even if faces are poorly lit, occluded (with masks), or in motion.



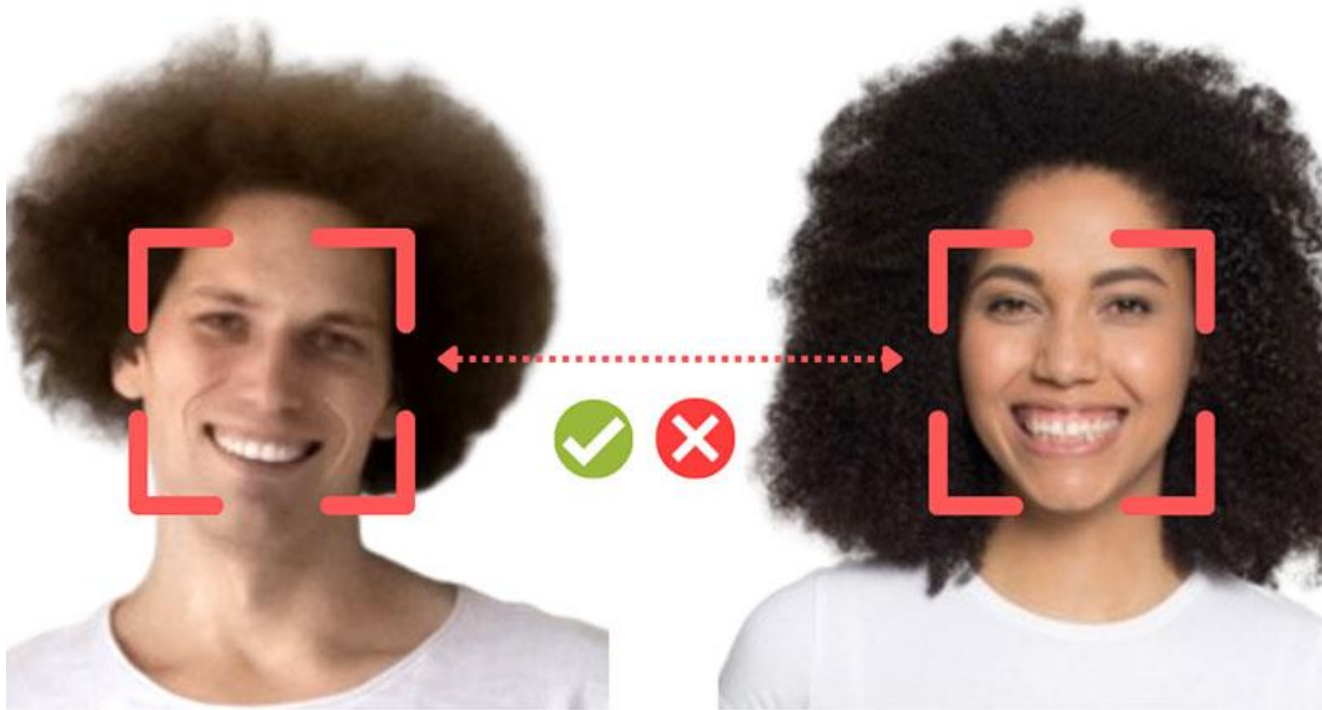
# API(Facial Template Extraction)

An n-dimensional vector set ("template") is extracted from a facial image.



# API(1:1 Face Match (Comparison))

Verifies identity by comparing an extracted facial template to previously identified images.



# API(1:N Face Search)

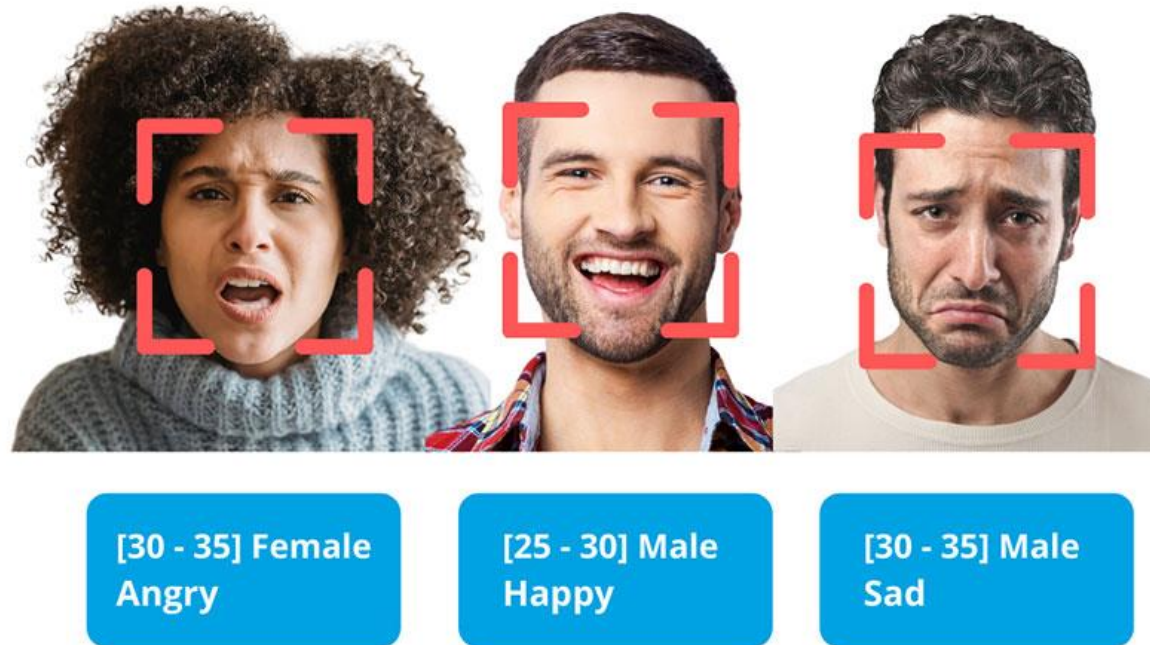
1:N search compares a facial template with pre-enrolled faces in the database to find the best match and confirm a person's identity





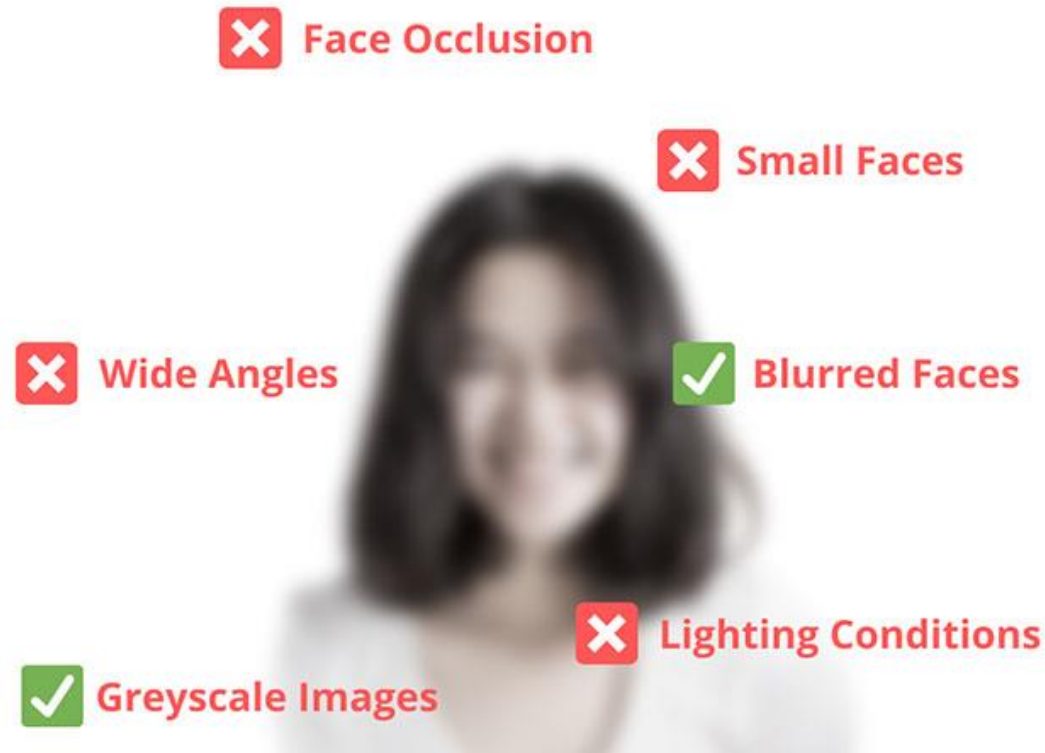
# API(Age, Gender, & Emotion Detection)

Identifies characteristics such as age, gender, and mood, enabling customized ads and targeted marketing for smart retail, as well as collecting visitor statistics.



# API(Image Quality Check)

FaceMatrix Platform verifies the quality of an image for any subpar conditions (blur, low light, etc.).





# API(People/Face Management)

Add, delete, and update information about a person. Face management also does the same for specific facial images.



# API(People Grouping)

Group people according to specific criteria. Use groups as a target to apply a 1:N search, or on a video feed to perform facial recognition.



# API(Anti-Spoofing)

FaceMatrix Platform supports liveness detection with 2D cameras, enabling anti-spoofing functionality using cameras on phones and tablets.

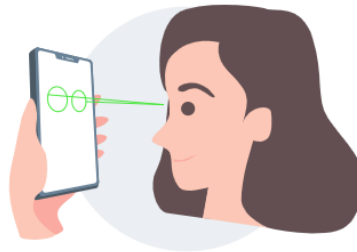


# eKYC & Fintech(1:1 Biometric Verification)

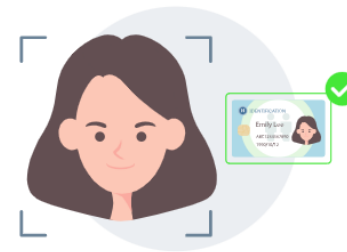
A customer captures a photo of their face and scans their ID card for personal verification. 2D or 3D cameras can be used for 1:1 face match between the ID card and the actual person.



Scan photo ID



Capture a live photo



1:1 face match comparison

# eKYC & Fintech(1:1 Biometric Verification)

## Biometric Verification Use Cases

eKYC & fintech solutions enable precise identity verification when customers log in or create an account for secure transactions.

### Open a Bank Account

- Customer requests to open an account
- Bank clerk takes the client's photo and scans ID card
- Biometric verification via facial recognition system
- Digital authentication complete

### Cardless ATM Transaction

- Customer's face captured by ATM's camera
- 1:1 Face Match with database
- Customer enters PIN for 2nd authentication
- Identity is confirmed
- Start transaction

### Mobile Banking

- Login to bank app with ID & password
- Scan ID and take a selfie for anti-spoofing
- Combine ID with physical biometrics for identification
- Biometric verification complete