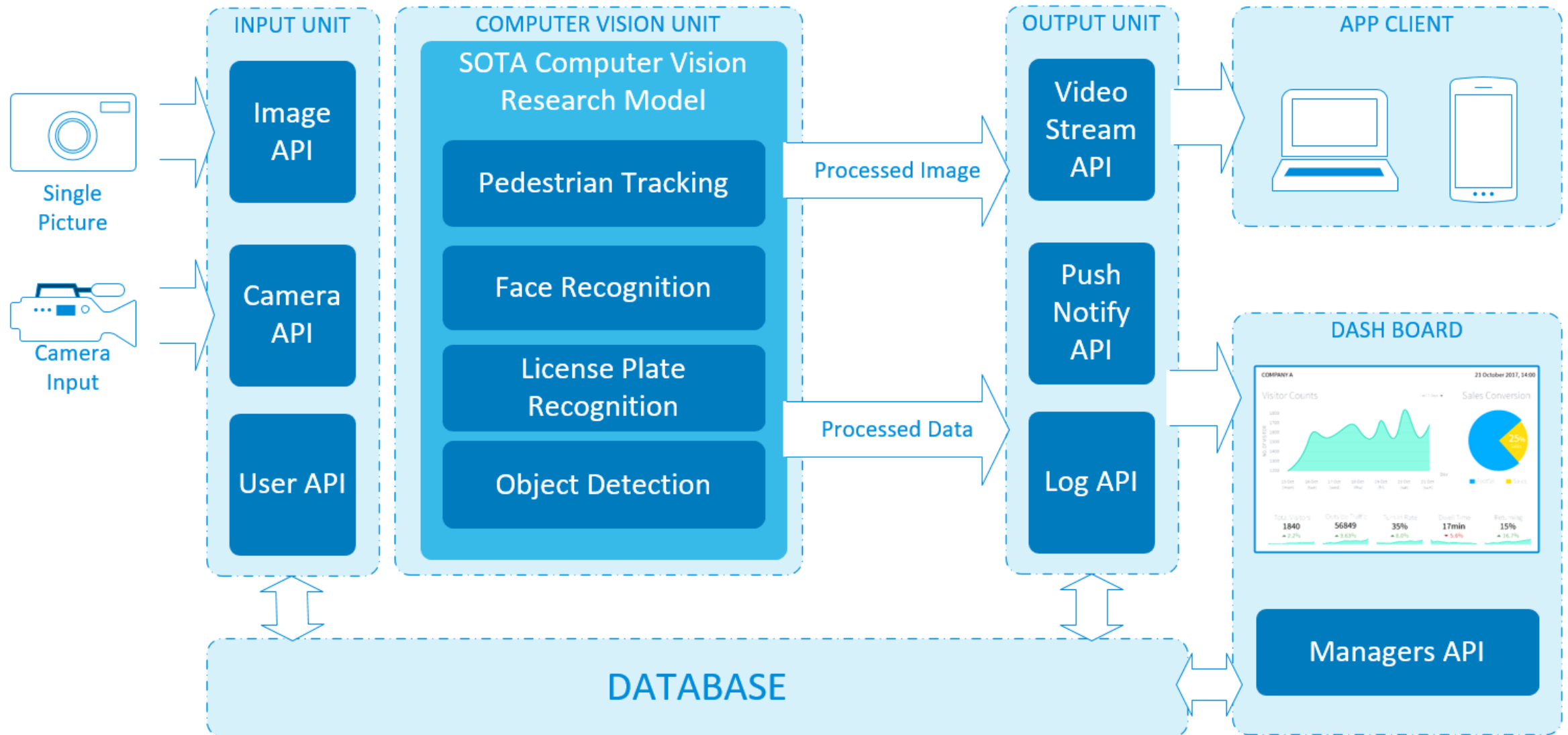


AI-Robotics-IoT&Blockchain

COMPUTER VISION RESEARCHS & APPLICATIONS

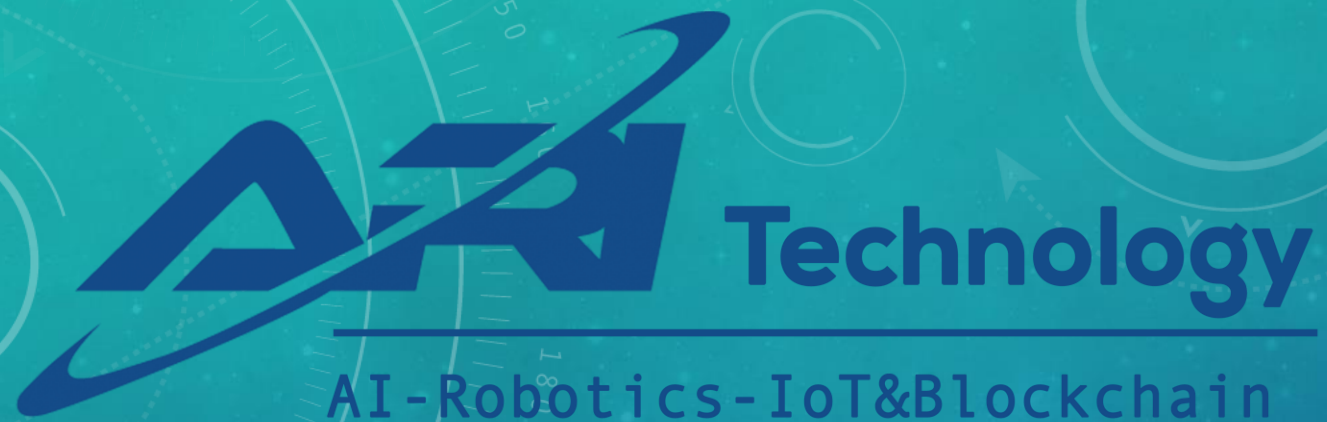
System Architecture



COMPUTER VISION UNIT

- Main Processing Unit
- Using State of the Art Deep Learning Research
- 4 Core Technology Module:
 - Pedestrian Tracking
 - Face Recognition
 - License Plate Recognition
 - Object Detection





MODULE 1

PEDESTRIAN TRACKING

COMPUTER VISION UNIT

SOTA Computer Vision
Research Model

Pedestrian Tracking

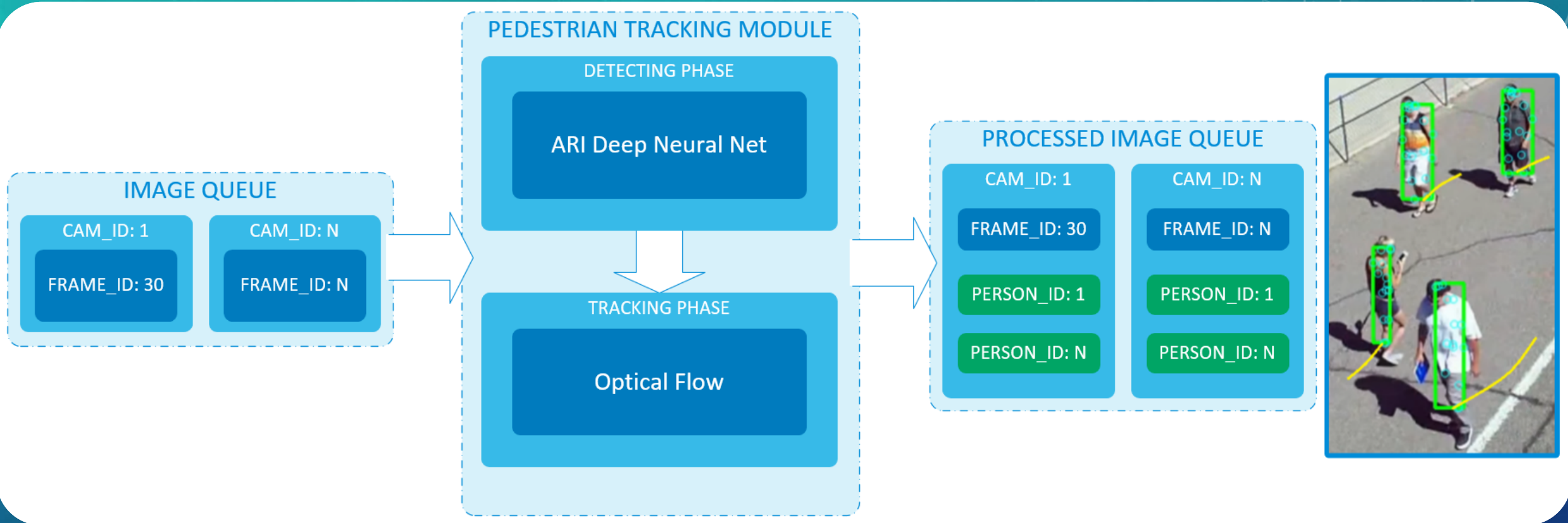
Face Recognition

License Plate
Recognition

Object Detection

Object Detection

Pedestrian Tracking Module



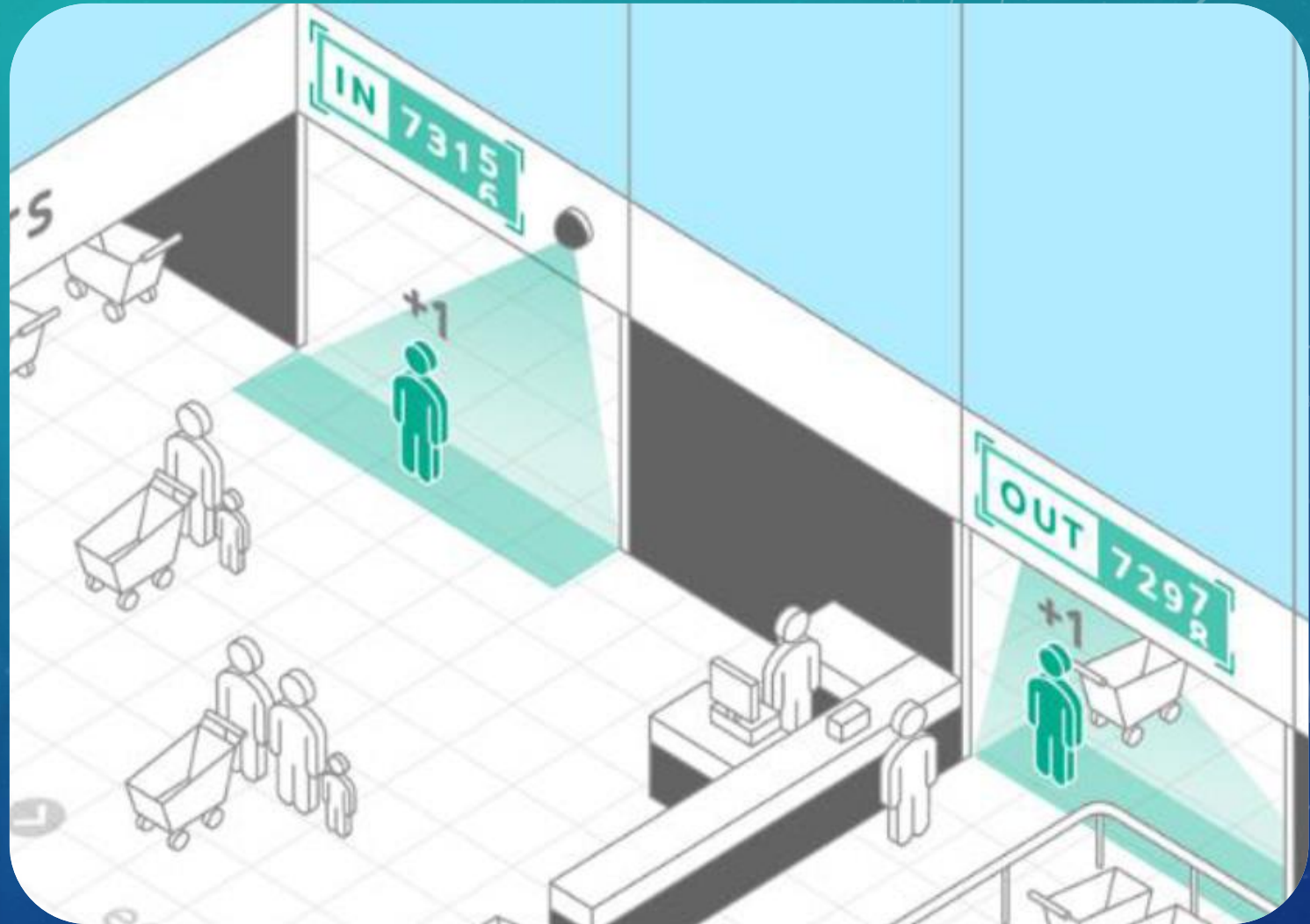
DASH BOARD

- User Management
- People Counting Report
- Alarm Push Notification



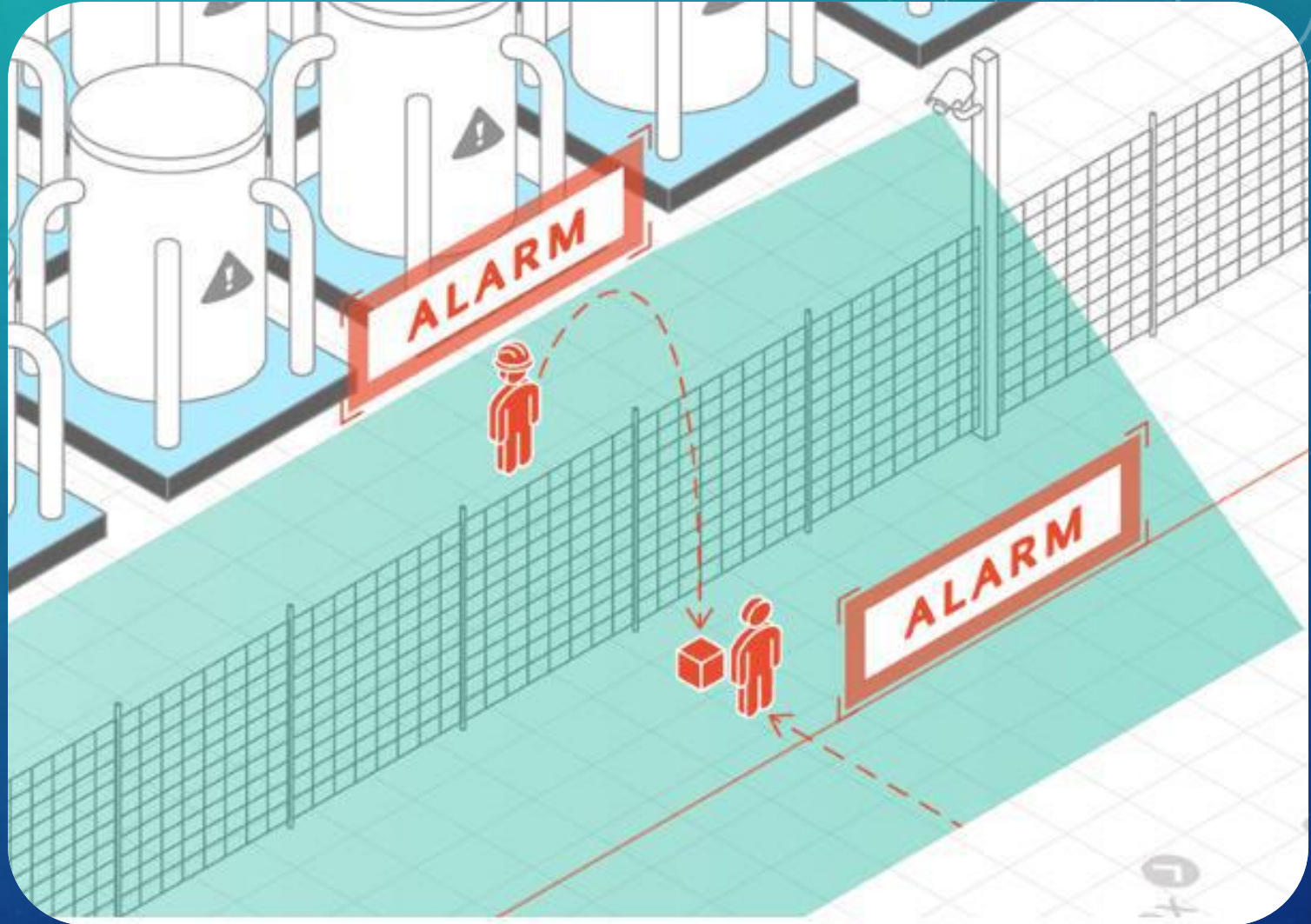
PEOPLE COUNTING

- Total in – out people
- Daily - Monthly Report
- Peak Hour Analytics



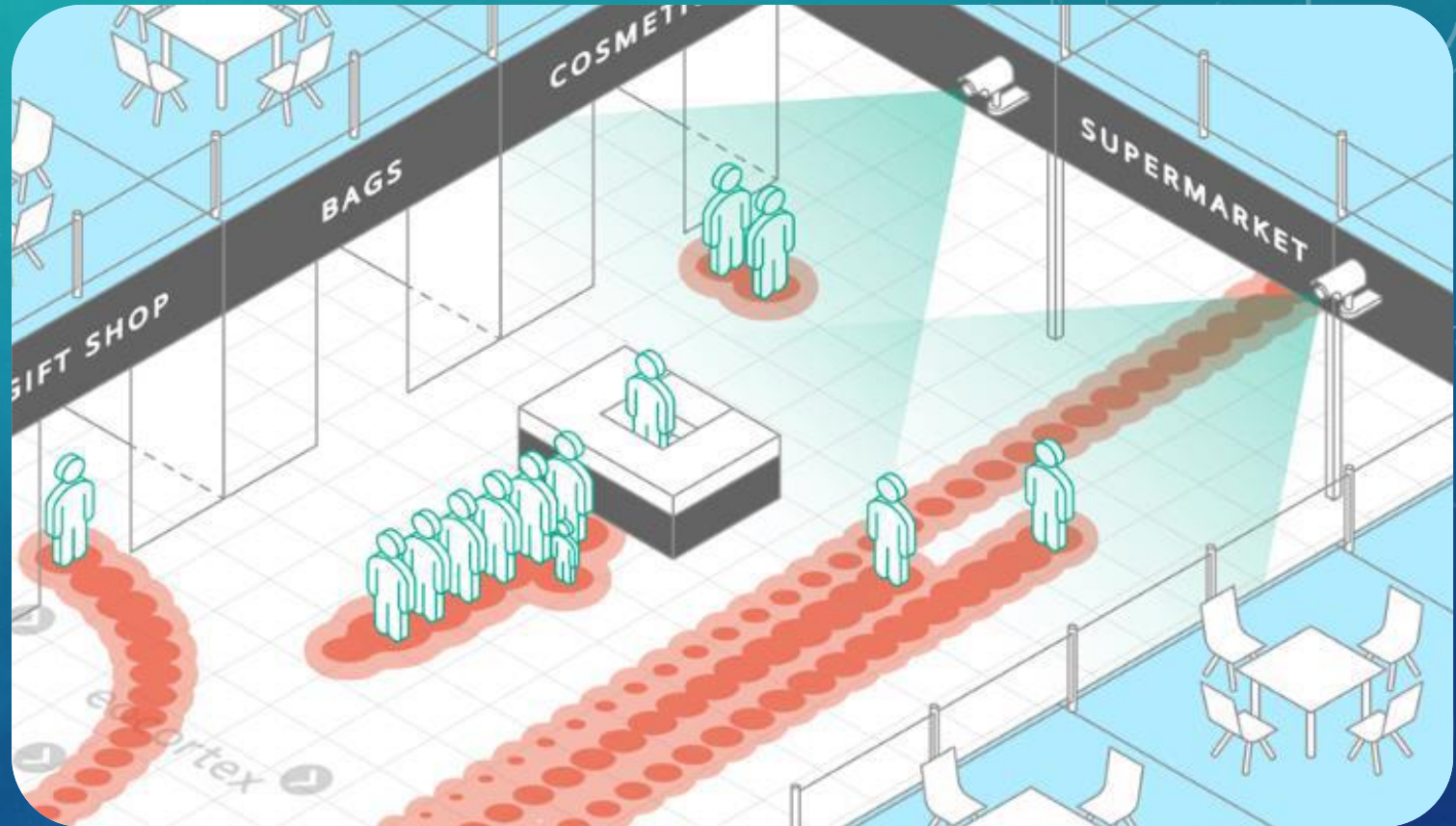
ALARM

- Restricted Zone Alarm
- Line Crossing Alarm
- Push Alarm to Phone/Laptop
- Alarm Time Setting



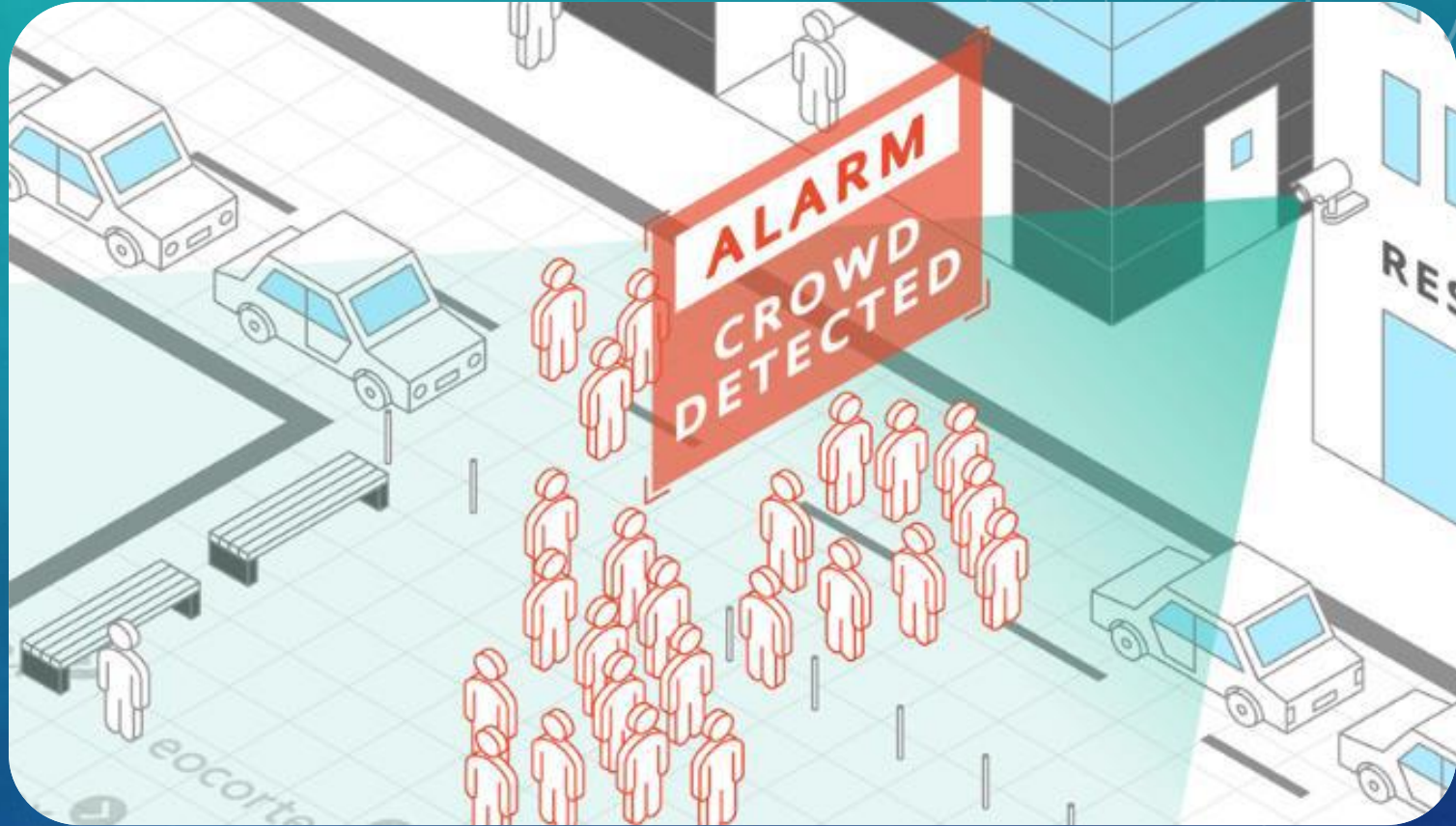
HEAT MAP

- Real-time Customer Tracking
- Optimize Popular Areas
- Improve Store Design



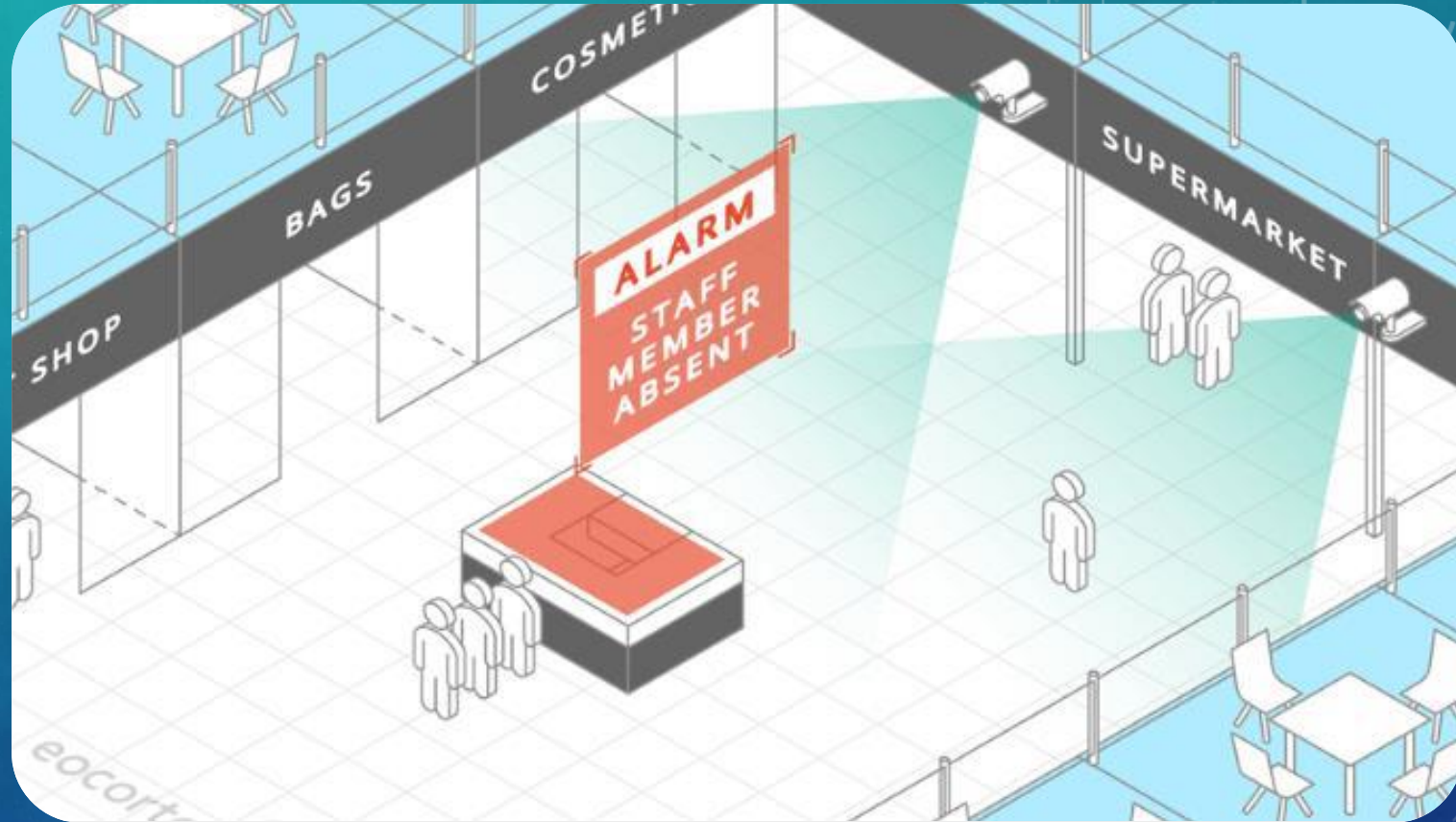
CROWD DETECTION

- Trigger Alarm to Phone/Laptop
- Improve Public Safety
- Camera Supervisor not needed

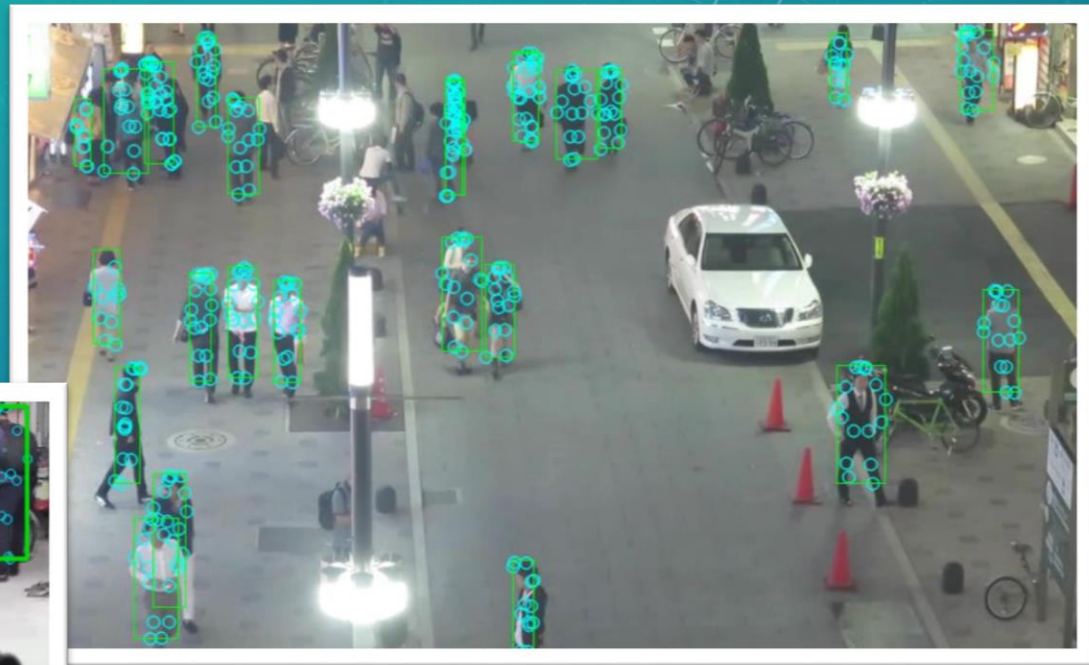
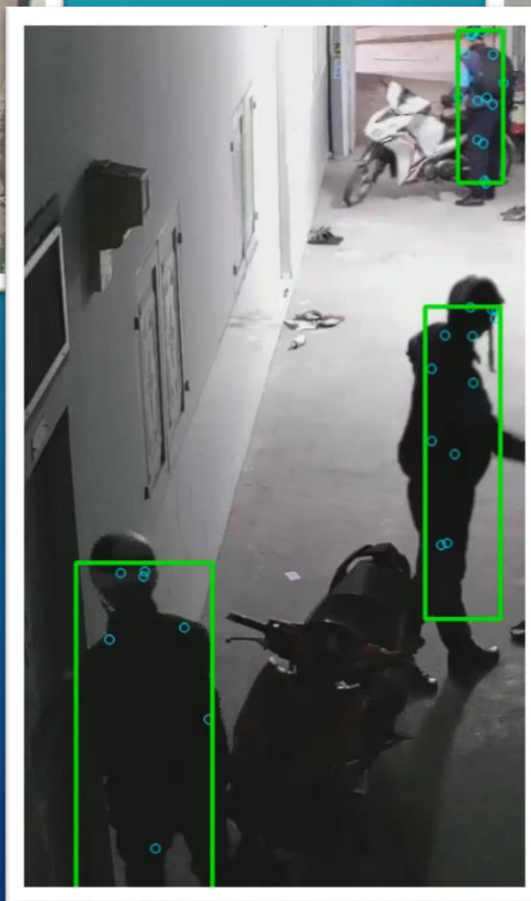
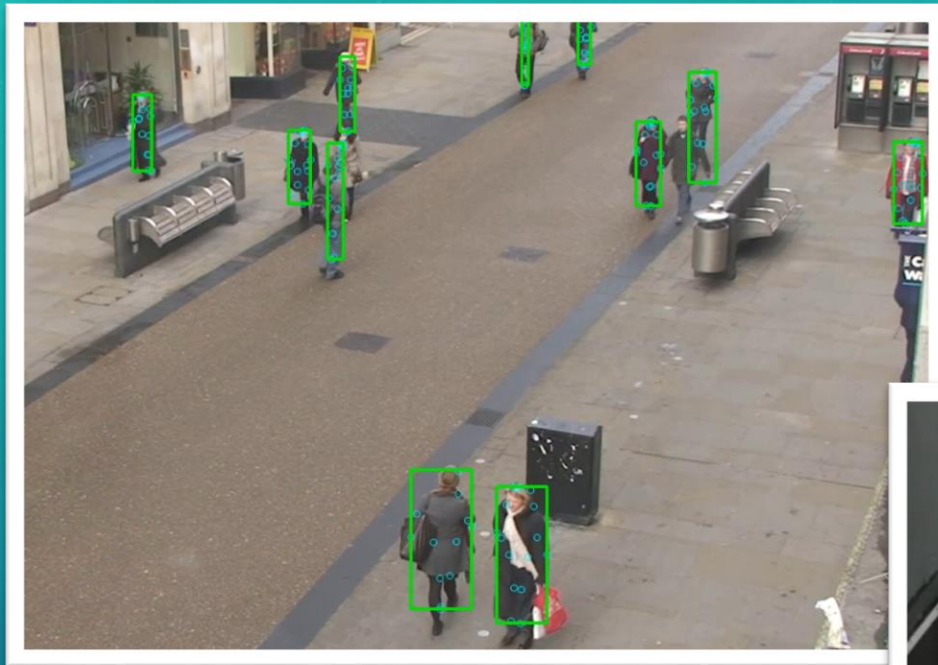


STAFF ABSENT

- Trigger Alarm to Phone/Laptop

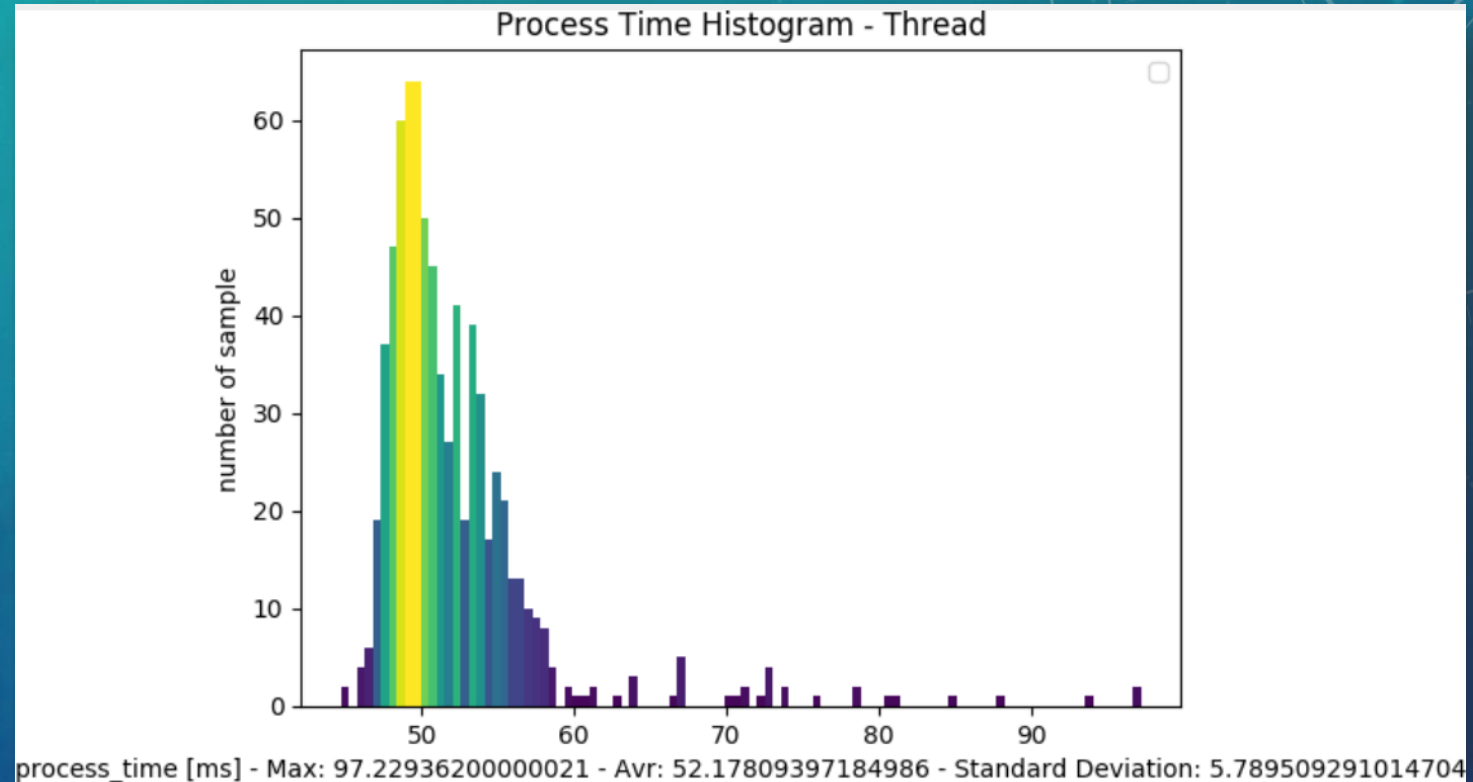


Result & Benchmark



RESULT & BENCHMARK

- Single Video People Detection
- Intel Core I7 Processor
- 8GB RAM
- No GPU Needed
- Ideal Conditions (No other heavy load)





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MODULE 2

FACE RECOGNITION

COMPUTER VISION UNIT

SOTA Computer Vision
Research Model

Pedestrian Tracking

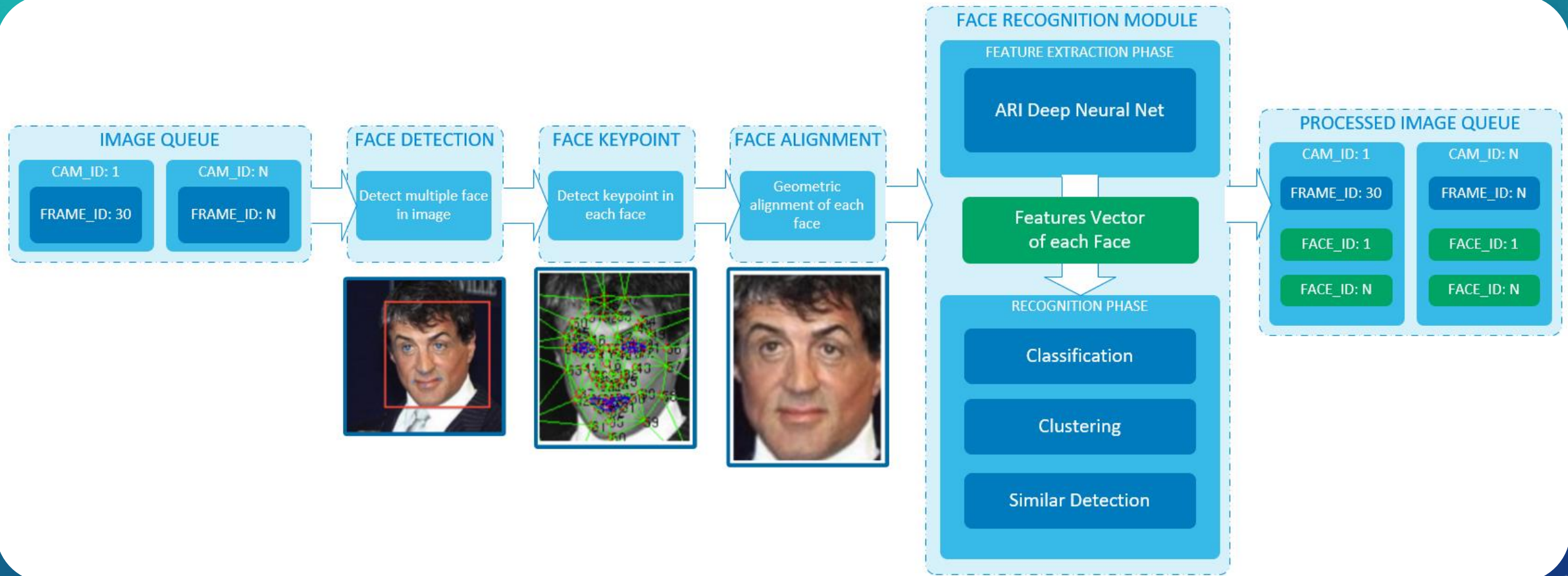
Face Recognition

License Plate
Recognition

Object Detection

Object Detection

Face Recognition Module



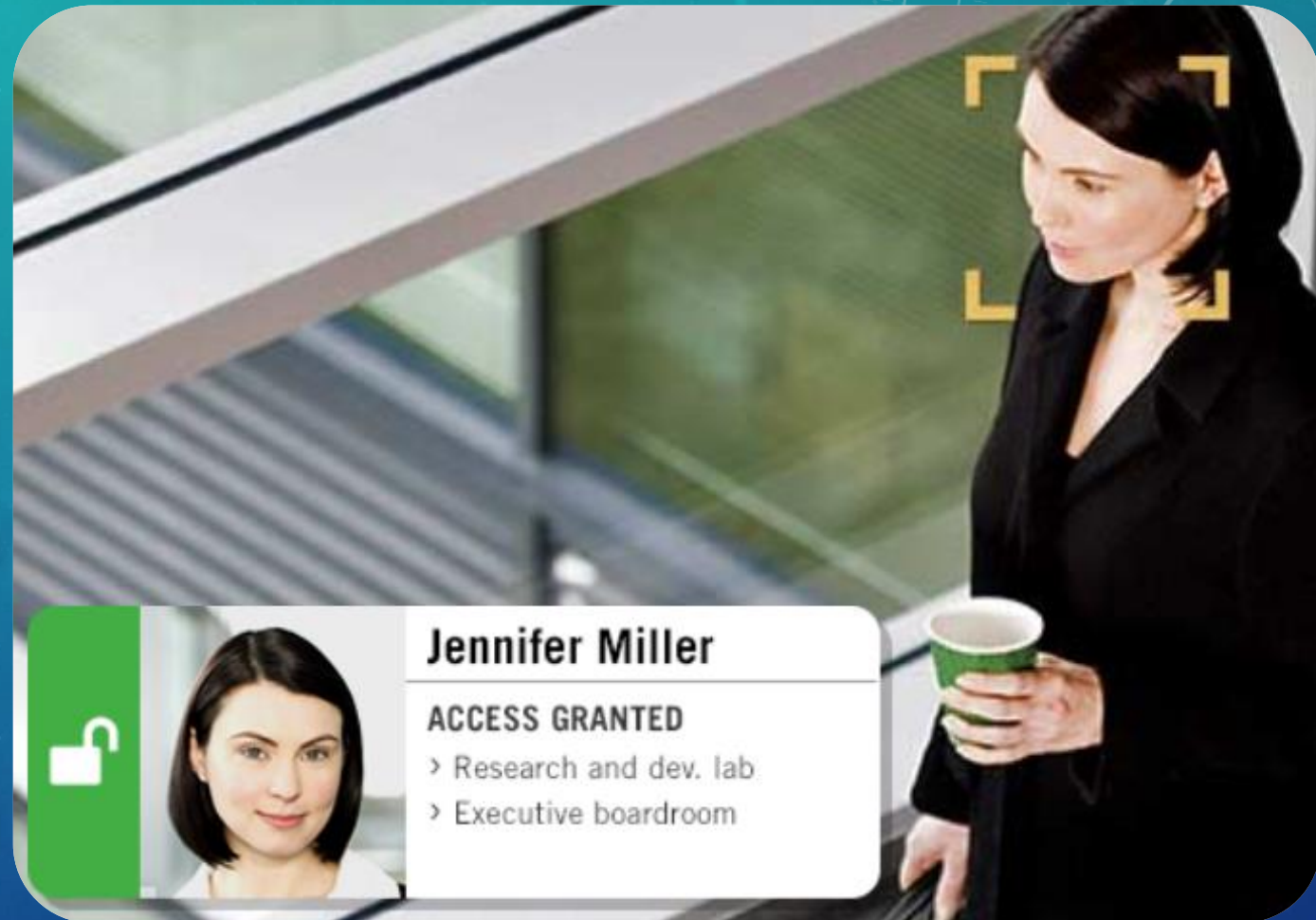
EMPLOYEE ATTENDANT

- Automatic Employee Face Scanning
- Time Saving
- In – Out time of Employee



ACCESS CONTROL

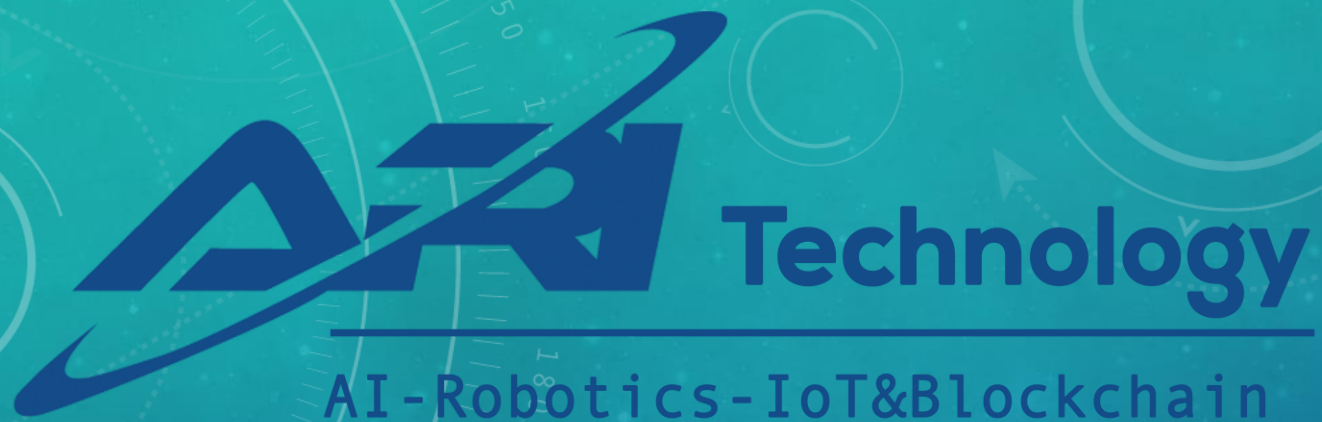
- Sensitive Areas Protection
- Push Alarm to Phone/Laptop when Unauthorized Access



FACE SEARCH SURVEILLANCE SYSTEM

- Search Similar Face of Known Target
- Save Face to Database for report
- Alarm Trigger Settings





MODULE 3

LICENSE PLATE RECOGNITION

COMPUTER VISION UNIT

SOTA Computer Vision
Research Model

Pedestrian Tracking

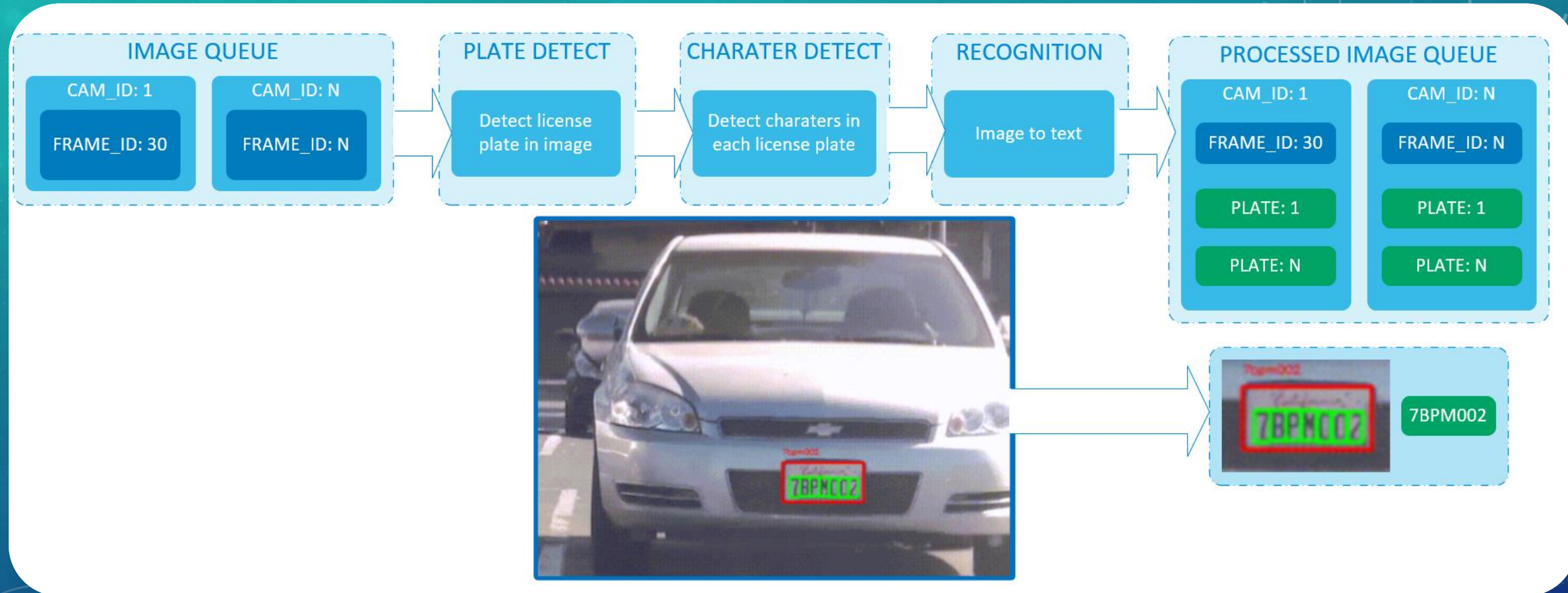
Face Recognition

License Plate
Recognition

Object Detection

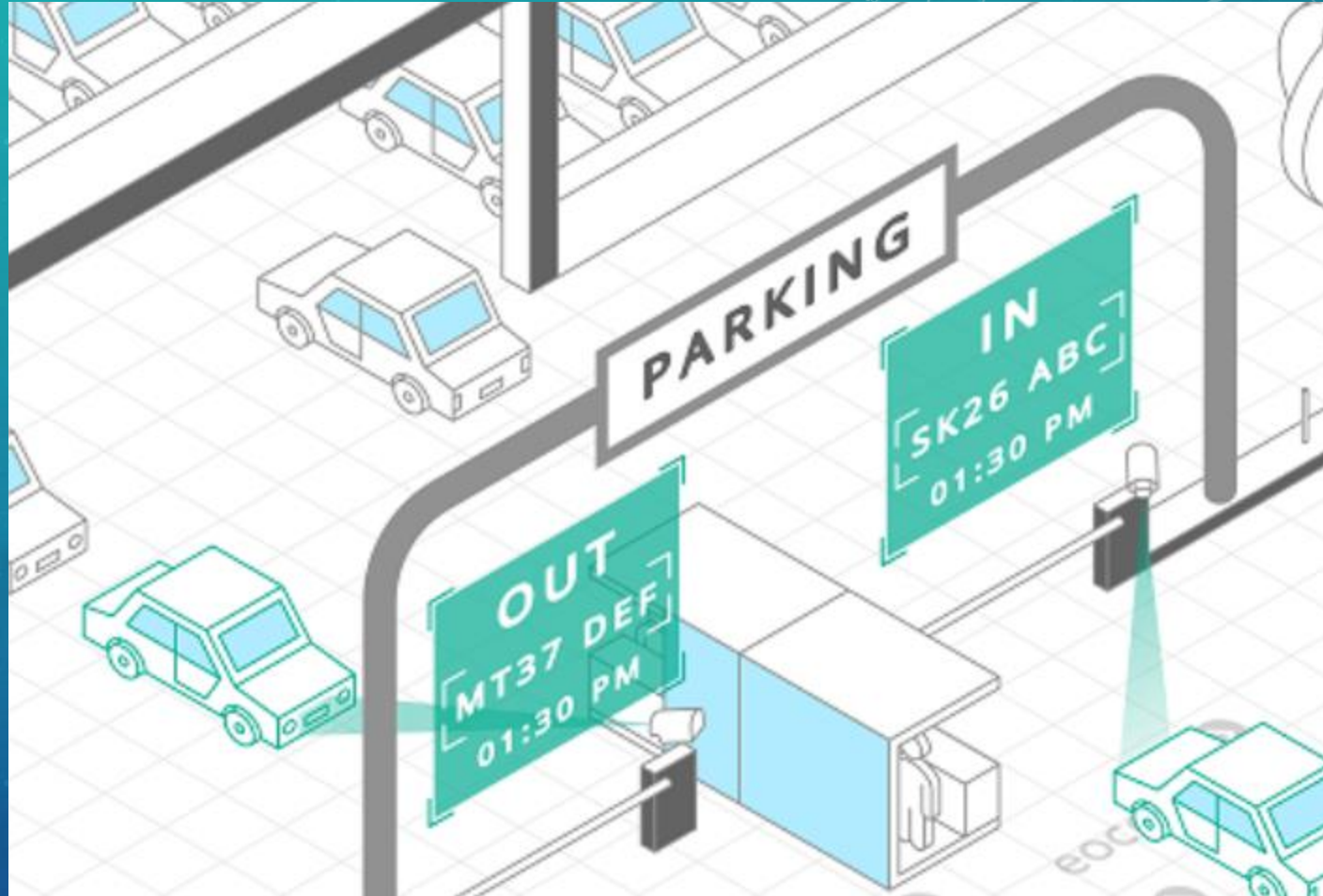
Object Detection

License Plate Recognition Module



AUTOMATIC PARKING LOT

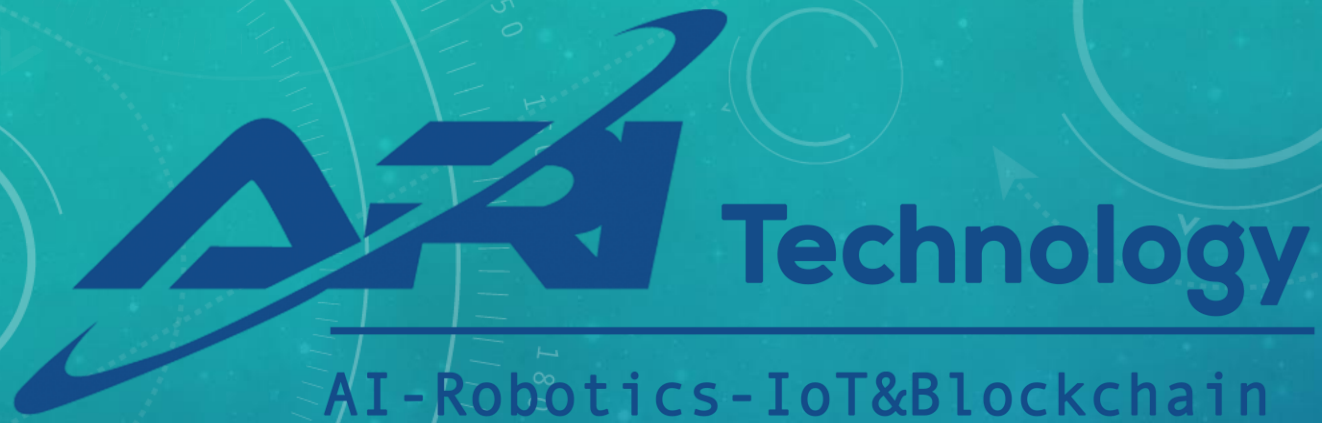
- In – Out Vehicle + Time
- Auto Fee Charge



UNAUTHORIZED VEHICLE

- Push Alarm to Phone/Laptop





MODULE 4

OBJECT DETECTION

COMPUTER VISION UNIT

SOTA Computer Vision
Research Model

Pedestrian Tracking

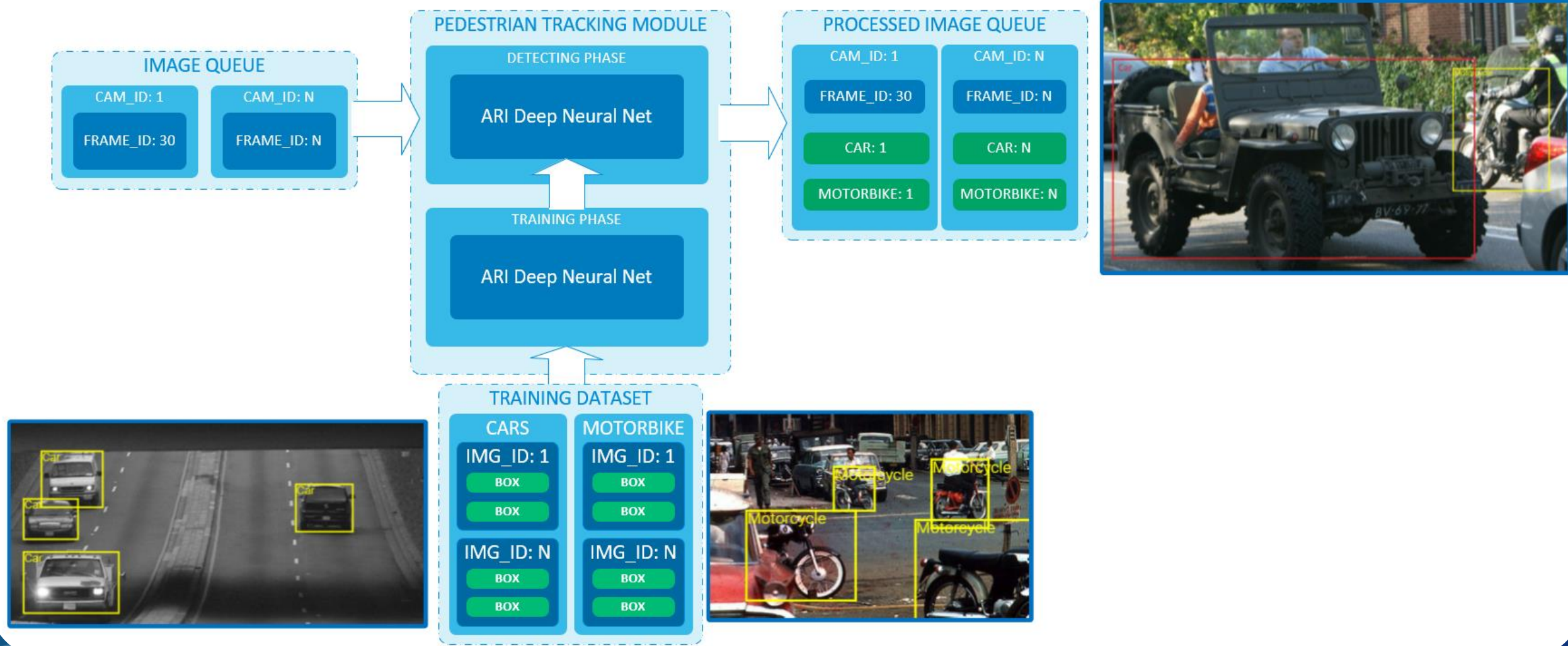
Face Recognition

License Plate
Recognition

Object Detection

Object Detection

Object Detection Module



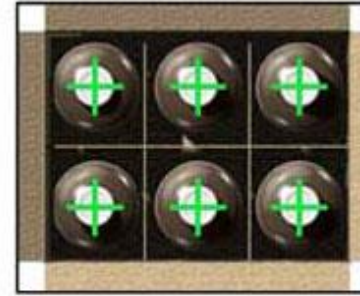
UNAUTHORIZED VEHICLE

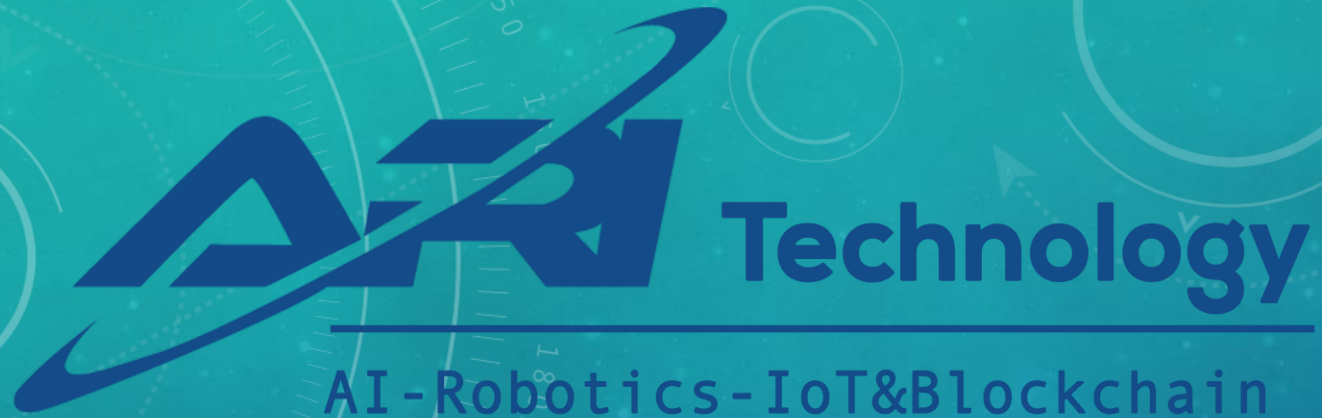
- Strange Objects Production Line
- Missing Part Detection
- Customize for Different Customer Data



UNAUTHORIZED VEHICLE

- Strange Objects Production Line
- Missing Part Detection
- Customize for Different Customer Data





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