



Case Study | Indonesia | Border control & Law Enforcement

# 180 million ABIS with quick response for police field operations



**Fast facts**

- **Country:** Indonesia
- **Population:** 267 million
- **Time span:** 2017 – now
- **Records:** 180 million

**Products used**

- **Automated Biometric Identification System (ABIS):** supporting face, fingerprint and iris matching
- **Face, Fingerprint and Iris SDKs**
- **Latent print editor**

**Deployment**

- **Large-scale template generation of 180 million records from multiple legacy databases**

**Challenge**

Indonesian police needed a biometric system for storing biometric data of its citizens to aid in criminal investigations. They wanted to collect faces, fingerprints and irises, and import data from older systems for easy searching and identification in the field. It is among the largest in the world.

- 180 million records, where each may include face, iris and ten fingerprints
- Quick search of millions of records for a match, often from field stations in a country of 17,000 islands with unreliable or slow connectivity
- Multiple legacy vendors' systems with multiple technology platforms

**Solution**

Innovatrics has built a single, large scale criminal Automated Biometric Identification System (ABIS) that can process high volumes of fingerprints, irises and faces for identification purposes.

Innovatrics has also provided Inafis with a number of custom features, such as latent print manager and editor for criminal case management or finger segmentation solution to process older palm prints into separate fingerprints for easier search.

- 3000 field stations with access to central biometric database
- Criminal/Civil ABIS with high availability, fingerprint, face, iris, palm print matching and latent print search
- Biometric audit and custom workflows
- Large-scale template generation (180 million records) from multiple legacy databases

**Results**

INAFIS has already used Innovatrics ABIS in many situations including searching for terrorists and identifying victims of natural disasters. Increasing the security of the country, the system is being constantly updated with new features to curb criminality and prevent violence.

**Indonesia has shown that biometric systems can be efficiently used even with challenging connectivity and a large population.**

- 5 seconds on average to search the whole database of over a billion separate record items
- Victim identification takes days instead of weeks or months
- Curbing terrorism due to quick response time

"We are happy to recommend Innovatrics to customers or partners who require an AFIS/ABIS for their projects particularly in the field of identification."

Drs. Agus Irianto, S.H., M.H., M.Si, Ph.D  
Police Senior Superintendent  
Indonesian National Police

### The power of efficient biometric algorithm

#### Before

140 servers

Multiple legacy biometric systems

Days or weeks for identification

Fingerprint

#### After

60 servers

Centralized large-scale criminal ABIS

Field stations can identify a match in 5 seconds

Fingerprint, face & iris recognition

### Security as a priority

The system is designed with security in mind. Each operation requires authentication and is recorded for future audit.

### Low bandwidth scenario

Field stations need to work even with low connectivity due to the country being split into thousands of islands. Low data requirements of ABIS mean that the search works even with irregular connectivity.

### Multi-modal system

ABIS offers a multitude of ways how to identify a person. Even if one modality is unavailable, there are still others to rely on. The combination of face, fingerprints and iris can provide higher accuracy in identifying a person among 180 million records.

## About us

We are an independent EU-based provider of multimodal biometric solutions. Our algorithms consistently rank among the fastest and most accurate in fingerprint and face recognition. For over 15 years, we have partnered with all types of organizations to build trusted and flexible biometric identification solutions. Our products are being used in more than 80 countries, benefiting more than a billion people worldwide.

## Contact

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