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# Capturing and Managing Biometrics

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# Outline

- The Challenges
- Usages
- What is in Place Now
- Identity Management
- Available Biometrics
- How do We Get There
- Biometric Engine Architecture
- Summary



# The Challenges

- One Biometric Will Not Work for All Applications
- Need to Create a Single Infrastructure for Identity Management
- Enablement of Civil and Criminal Management
- Eliminate Re-Investing When Deploying a New Biometric(s)
- Currently Each New Deployment Requires Investment in Biometric Management
- Deployments of Biometrics Have Difficulty in Data Sharing, Increasing Integration Overhead



# Usages

- Birth Records
- Health Benefits
- Drivers License
- Passports and Visas
- Access to Buildings
- Access to Computer Networks / Internet
- Booking and Investigation of Criminals
- Forensic Analysis of Crime Scenes
- Forensic Analysis of Disaster Zones



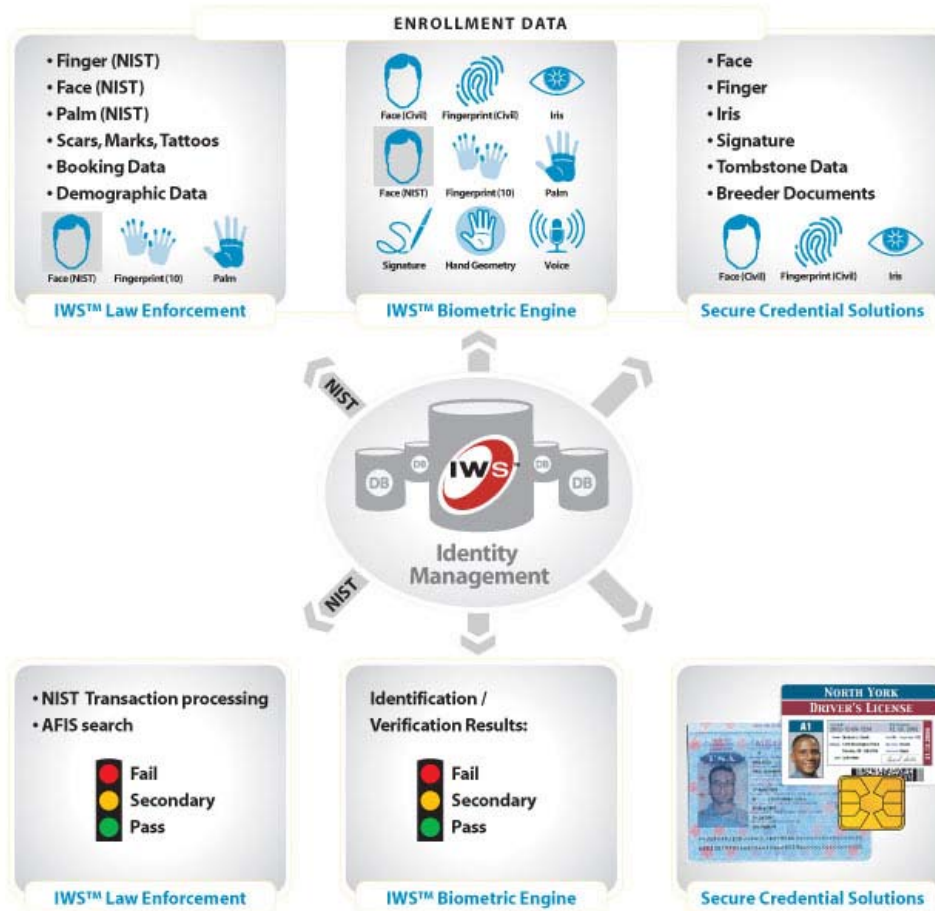
# What is in Place now?

- AFIS
- Building Access Control
- Desktop Security
- Background Checks
- Some Border Controls
- Government Issued Credentials
- Frequent Travelers
- Forensic Analysis



# Identity Management

## Identity Management Framework





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# Available Biometrics







# How do We get There?

- Common Infrastructure
- Orchestration of Multiple Biometrics
- Use the Correct Biometric(s) for the Situation
- Never Only Keep Templates
- Be Prepared for Change
- Must Comply with Standards
  - ISO
  - M1
  - ICAO
  - FIPS
  - NIST





# How do We get There?

- Collaboration of Combination/Fusion Techniques
- Minimize FAR and FRR to Zero
- Strong Defense Mechanisms
  - Secondary Processing
  - Biometric Challenges
- Support of All uses of Searching and Matching
  - 1:1
  - 1:N
  - X:N
  - N:N



# Biometric Engine Architecture

- Support All Hardware Devices
- Support All Algorithms
- Support All Standards (ICAO, ISO, CBEFF, BioAPI)
- Common SDK Calls for All Biometric Types
- Support Verification (1:1), Identification(1:N), Investigation (X:N), Population Cleanup (N:N), Match Off Card, Match On Card(MoC)
- Scalable to Unlimited Population Sizes
- Always Keep Biometric Images Captured
- Supply Multi-Modal/Fusion Matching Technology



# Summary

- Biometrics Can be Deployed in Any Situation
- One Biometric does NOT Work in All Applications
- Be Prepared for new Technologies and New Generation Devices and Algorithms
- A Biometric Engine Will Save Time and Money:
- Build Once, Deploy Many Times