ADOA-ASET
Arizona Strategic Enterprise Technology

Project Investment Justification

Version 01.01

A Statewide Standard Document for Information Technology Projects

Project Title:

AZAFIS UPGRADE – MORPHOBIS

Agency Name:	**Arizona Department of Public Safety**
Date:	**May 1, 2014**
Agency Contact Name:	**Captain Ray Butler** **Michele Johnson**
Agency Contact Phone:	
Agency Contact Email:	

Hover for Instructions

I. Management Summary*

As outlined in ARS Statute 41-1750A.11, the Arizona Department of Public Safety (AZDPS) is required to operate and maintain the Arizona Automated Fingerprint Identification System (AZAFIS). This shared statewide computerized system is used to positively identify criminals (and others) through technical searches of fingerprints against fingerprint images stored in computerized databases. Fingerprint records searched against the AZAFIS databases come from a variety of sources: arrestees booked into jails, criminal suspects, registered sex offenders, adjudicated juvenile offenders, deceased persons, civil offenders, employment and licensing applicants, Arizona Department of Corrections inmates, etc. To ensure AZAFIS continues to provide required and expected services to its criminal justice and noncriminal justice customers, the system must be regularly updated and expanded. AZDPS proposes to purchase an upgrade to the current version of the automated fingerprint identification system.

II. Project Investment Justification (PIJ) Type*

☐ **Yes** ☒ **No** Is this document being provided for a Pre-PIJ / Assessment phase?

If Yes,

Identify any cost to be incurred during the Assessment phase.	$
Based on research done to date, provide a high-level estimate or range of development costs anticipated for the full PIJ.	$

Explain:
Click here to enter text.

☐ **Yes** ☒ **No** Will a Request for Proposal (RFP) be issued as part of the Pre-PIJ or PIJ?

III. Business Case

*A. Business Problem**

The following are some problems with the current fingerprint system which affect AZDPS and other Arizona Law Enforcement AZAFIS user agencies statewide:

This upgrade will enable the AZAFIS to be in compliance with the Federal Bureau of Investigation (FBI), Next Generation Identification (NGI) program. The NGI program began in 2010 and is expected to be completed in 2014. The last upgrade of the AZAFIS was completed in 2007; therefore, it does not contain the necessary components/programming for NGI.

The current system lacks the capability to produce reports of various transactions which occur, to include: consolidations, deletions of records, modifications of records etc.

The current system lacks the ability to conduct 3rd party record validations which permits clerical errors resulting in inaccurate identification information to be forwarded to the Arizona Computerized Criminal History System (ACCH) and the Federal Bureau of Investigation (FBI).

The current MetaMorpho reporting system (Morpho View) which is used to review fingerprint records with incomplete or questioned data, will only report detailed fingerprint processing information for up to three months. This information must be retained for a longer period of time in order to ensure accurate and complete fingerprint record processing.

The current system record consolidation process will not meet the new FBI National Fingerprint File timeline requirements.

Latent examiners have to search multiple databases to obtain adequate prints for comparison.

Current system does not store major case prints or palm prints.

*B. Proposed Business Solution**

The upgrades described in this PIJ reflect a course of action to upgrade the existing seven-year old fingerprint biometric technology in order to provide Arizona Law Enforcement and Criminal Justice agencies with the most current technology available.

AZDPS is requesting to acquire an upgrade to the existing AZAFIS called MorphoBis. MorphoBis is the latest in biometric identification technology and is offered by Safran MorphoTrak (Morpho). While the hardware is available through the current Morpho contract, the software will be acquired through the current state contracted vendor SHI. Enhancements will include:

- Compliance with the new FBI's Next Generation Identification (NGI) program. NGI will further advance biometric identification services, replace current FBI IAFIS technical capabilities, and introduce new functionality. The FBI NGI project is being introduced across a multi-year timeframe within a phased approach, with all phases implemented by 2014. NGI provides new programming which includes Rap Back workflow, enhanced latent print functionality, faster response time, enhanced interoperability, etc.

- Enhanced Latent Case Management.

- The latest FBI algorithms with improved accuracy and throughput.

- Latent prints can be processed independently from their case, which will allow latent examiners to verify the results of one latent search while another examiner is editing latent fingerprints from the same case. Currently, examiners must wait for each latent case to finish before they can work on additional searches.

- Latent examiners will be able to encode a latent once and submit it to multiple agencies. Examiners must now spend countless hours encoding latent fingerprints for Arizona submission and re-code them for FBI submission. In addition, latent examiners will only have to search one database to obtain adequate prints instead of the multiple databases they must search now.

- Service oriented architecture which will allow feature upgrades to be "plugged in", therefore saving additional programming costs when features are added to the system.

- Web based applications which will allow operators to move between tasks, improving efficiency.

- Major Case fingerprints and Palm Prints will be stored in the system.

- Throughput and Database increase. The projected Throughput and Database increases were calculated by a projected 1.33 percent annual growth rate for six years.

As part of this project, 63 AZAFIS workstations will be purchased. Sixteen of the workstations are for the AZDPS with the remaining forty-seven being deployed to the other twelve Arizona law enforcement AZAFIS user agencies.

*C. Quantified Benefits**

X	Service enhancement
	Increased revenue
	Cost reduction
X	Problem avoidance
	Risk avoidance

Explain:

Service enhancement

This upgrade will allow AZDPS to upgrade the existing seven-year old biometric fingerprint system with the most current biometric technology. This upgrade will also enable AZDPS to continue providing mandated services to all of Arizona Law Enforcement agencies, Criminal Justice agencies, and the citizens of Arizona.

Problem Avoidance

Arizona's inability to become compliant with the FBI NGI program will be avoided with this upgrade. The throughput and database capacity increase will allow for an estimated 1.33 percent growth rate over a six year period avoiding the need to purchase additional storage for latent prints that the current system no longer has the capacity to house.

IV. Technology Approach

*A. Proposed Technology Solution**

The MorphoBis product is an update to the existing MetaMorpho system.

The system will continue to be physically housed at the AZDPS and managed by Morpho Customer Service Engineers on site. The existing AZAFIS network will continue to be housed at AZDPS and managed by AZDPS.

This version upgrade will support the following:

- Existing AZDPS workflows, which will save additional/new programming costs
- Existing external AZAFIS equipment interfaces with Arizona Law Enforcement agencies to include:
  - Fingerprint livescan devices: AZAFIS user agencies purchased new fingerprint livescan devices in 2012-2013 totaling approximately $2,012,900.00. The MorphoBis upgrade will allow AZ agencies to continue to use their recently purchased devices so there will be no additional cost to agencies to purchase new ones since these are compliant with the upgraded product.
  - Two-finger identification mobile devices: AZAFIS user agencies purchased new two-finger mobile identification devices, unique to the current system in 2012-2013, totaling approximately $350,000.00. Arizona agencies are continuing to purchase these devices in 2014. The MorphoBis upgrade will allow AZ agencies to continue to use their recently purchased devices so there will be no additional cost to agencies to purchase new ones since these are compliant with the upgraded product.
  - Existing Card scans, store and forwards, batch scanners, print servers.
  - Existing Mugshot Photo Interface (MPI).

  The ability to retain these external equipment interfaces will save having to acquire additional equipment and avoid new programming costs for AZDPS and other Arizona Law Enforcement AZAFIS users.
- Internal interface with the Arizona Computerized Criminal History System (ACCH).
- External interface with the FBI Integrated Fingerprint Identification System (IAFIS).
- Multiple external Records Management System (RMS) interfaces at Arizona law enforcement agencies. Retention of these RMS interfaces will save Arizona agencies programming costs with their respective venders.
- This upgrade includes the latest fingerprint matching algorithms which will increase system accuracy. The MorphoBis upgrade will streamline the workflow

in the existing Universal Latent Workstations statewide. The upgrade will remove an existing interface between the AZAFIS and the National Institute of Standards and Technology Archive in the AFIS which will resolve existing synchronization issues.

- This upgrade includes the purchase of 63 upgraded AZAFIS workstations which will be utilized by AZDPS as well as AZAFIS user agencies. This purchase will ease the financial burden to these agencies.

- This new system will replace the existing AZDPS Optical Print and Photo Image Subsystem (OPPIS) archival system, which was a separate component of the legacy MetaMorpho system. Once fingerprints stored in OPPIS are migrated to the new system, AZDPS will sunset OPPIS.

- Service oriented architecture which will allow feature upgrades to be "plugged in" will provide additional programming costs when features are added.

B. Technology Environment

The MorphoBis product is comprised of front end workstations which run 64-bit Windows 7 Software. The backend servers used for matching, applications and data exchange run Oracle/Linux 6.4.

To provide real-time access to the full range of AZAFIS image-based identification tools and functionalities, the existing 169 livescan workstations and 63 new Automated Fingerprint Identification System (AZAFIS) search/verification workstations will be integrated into the same network and security environment as the existing version at the AZDPS, and to other AZAFIS user agencies via the statewide AZDPS data network.

The network uses the FBI and Arizona ADOA-ASET IP SEC (Internet protocol security). Data is transmitted on secure internet circuits or State of Arizona contracted leased lines and meets all security specifications set forth in the FBI CJIS Security Policy.

C. Selection Process

AZDPS has had a long standing sole source contract with Morpho Inc., which has provided all three prior version upgrades to the AZAFIS. All previous version upgrades have been highly customized to meet Arizona's needs. The proposed upgrade to the MorphoBis will contain the necessary Arizona customization as well as the latest in Biometric technology enhancements. AZDPS is requesting to upgrade the current version of the Morpho System.

V. Project Approach

*A. Project Schedule**

Project Start Date: 7/1/2014 **Project End Date**: 7/01/2015

B. Project Milestones

Major Milestones	Start Date	Finish Date
System design review	7/1/2014	11/30/2014
Migration	11/1/2014	06/1/2015
Factory Acceptance Testing (FAT)	05/09/2015	05/13/2015
Site Acceptance Testing (SAT)	5/19/2015	6/4/2015
Training	6/6/2015	6/24/2015
Go-Live	6/28/2015	6/30/2015

VI. Roles and Responsibilities

A. Project Roles and Responsibilities

Captain Raymond R. Butler – Project Sponsor
Mr. Gregg Hayes – AZDPS IT Project Manager
Ms. Michele Johnson – AZDPS Operational Project Manager
MorphoTrak Project Manager – To be assigned

B. Project Manager Certification

	Project Management Professional (PMP) Certified
X	State of Arizona Certified
	Project Management Certification not required

C. Full-Time Employee (FTE) Project Hours

Total Full-Time Employee Hours	1500
Total Full-Time Employee Cost	$72,696.00

VII. Risk Matrix, Areas of Impact, Itemized List, PIJ Financials

VIII. Project Approvals

*A. Agency CIO Review**

Key Management Information	Yes	No
1. Is this project for a mission-critical application system?	**X**	
2. Is this project referenced in your agency's Strategic IT Plan?	**X**	
3. Is this project in compliance with all agency and State standards and policies for network, security, platform, software/application, and/or data/information as defined in http://aset.azdoa.gov/security/policies-standards-and-procedures, and applicable to this project? If **NO**, explain in detail in the "XI. Additional Information" section below.	**X**	
4. Will this project transmit, store, or process sensitive, confidential or Personally Identifiable Information (PII) data? If **YES,** in the "XI. Additional Information" section below, describe what security controls are being put in place to protect the data.	**X**	
5. Is this project in compliance with the Arizona Revised Statutes (A.R.S.) and GRRC rules?	**X**	
6. Is this project in compliance with the statewide policy regarding the accessibility to equipment and information technology for citizens with disabilities?	**X**	

*B. Project Values**

The following table should be populated with summary information from other sections of the PIJ.

Description	Section	Number or Cost
Assessment Cost (if applicable for Pre-PIJ)	II. PIJ Type - Pre-PIJ Assessment Cost	**$**
Total Development Cost	VII. PIJ Financials tab	**$6,165,928.55**
Total Project Cost	VII. PIJ Financials tab	**$12,265,217.55**
FTE Hours	VI. Roles and Responsibilities	**1500**

*C. Agency Approvals**

Contact	Printed Name	Signature	Email and Phone
Project Manager:	Gregg Hayes		
Agency Information Security Officer:	Graciano Cervantes		
Agency CIO:	Gregg Hayes		
Project Sponsor:	Captain Raymond Butler		
Agency Director:	Robert C. Halliday		

IX. Optional Attachments

A. Vendor Quotes – See attached

X. Glossary

ACCH – Arizona Computerized Criminal History System

Algorithms – is a procedure that maps an arbitrarily large data item (such as a computer file) to a much shorter bit string, its fingerprint, that uniquely identifies the original data for all practical purposes just as human fingerprints uniquely identify people for practical purposes

AZAFIS – Arizona Automated Fingerprint Identification System

AZDPS – Arizona Department of Public Safety

FBI CJIS – Federal Bureau of Investigation, Criminal Justice Information System

Latent Fingerprint - Latent fingerprint is a fingerprint left on a surface by deposits of oils and/or perspiration from the finger. It is not usually visible to the naked eye but may be detected with special techniques such as dusting with fine powder and then lifting the pattern of powder with transparent tape. A laser can make some fingerprints glow which are then photographed.

NGI – FBI Next Generation Identification Program

NIST – National Institute of Standards and Technology

Rap Back - Rap Back is a new service provided by the Federal Bureau of Investigations (FBI) that will provide real-time notifications on the federal level "hit" to our applicants. This new service is similar to the current Arizona state File Stop program, providing periodic state criminal history records checks in accordance with A.R.S 41-1758.03(J) and 41-1758.07(J).

Tenprint (tenprint searches) – Comparison of all ten fingerprints

Store & Forward – A system used to review incorrect records prior to submission to the state AZAFIS.

XI. Additional Information

As part of the requirements for this project, and as mandated by the Federal Bureau of Investigation (FBI), AZDPS has stated that the solution shall meet the current FBI Criminal Justice Information System (CJIS) Security Policy and the data communication and encryption shall adhere to the Federal Information Processing Standards (FIPS) 140-2 standards in order to protect the PII and criminal justice information.

Links:

ADOA-ASET Website

ADOA-ASET Project Investment Justification Information Templates and Contacts

Email Addresses:

Strategic Oversight

ADOA-ASET_Webmaster@azdoa.gov