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## Section 4

# Facial Recognition Systems

## *Guidelines for Specifications, Procurement, Deployment, and Operations*

### Facial Recognition Systems Guidelines Scope

This document provides a general outline of issues to consider when commissioning a Facial Recognition Searching System (FR). It is structured into five high level sections, each representing a phase in a logical process flow:

- Business Case Definition
- Requirements Gathering
- Proposal and Procurement
- Deployment Planning
- Operations and Maintenance

Each section provides an overview of relevant topics and main questions to be asked at that particular phase in the commissioning process. As the purpose of this document is to give a general idea of the process, a more detailed treatment of the topics in each section will be provided in subsequent FISWG documents. The work herein reflects the best practices gathered and lessons learned by FISWG.

The document is not intended to be an in-depth study of facial searching systems, a review of facial algorithms, a buyer's guide to FR systems, nor a standard on the design and deployment of FR systems.

The intended audience of the document is:

- Agencies that have not deployed but may be considering a FR system.
- Agencies that will be deploying a FR system.
- New users of a FR system.
- Any agency or user who wishes to gain a broader understanding of FR system concepts.

An *Agency* will refer to the organization responsible for the FR system. A *user* will utilize or support the FR system.

### Business Case Definition

#### Goal

The goal of the FISWG documents concerning this phase is to ensure the Agency is capable of discussing the operational scenarios of the FR system and of understanding the Business Case for the FR system. This knowledge will be the basis for the following phases because it forms the justification for the entire system. It will also allow the Agency to selectively discuss with users, subject matter experts, and potential vendors the system specifics that will be important in getting accurate information going forward.

The first step in commissioning a FR system is defining the Business Case that states what the FR system is intended to do for the Agency. Key questions in this phase are:

- Who are the primary stakeholders?
- What is the ultimate goal of the FR system?
- How will a return on investment (ROI) be measured and defended?
- What are the questions that should be asked when building a Business Case?
- How will the FR system integrate into new or existing operational processes?

#### Intended Audience

The intended audience of the FISWG documents on FR Business Case definition is the entire group or team responsible for the overall system as defined by the Agency. The documents should be available to all people involved in the FR system so that the original basis for the system can be identified. The information given in or derived from the Business Case documents could be considered internal to the host agency and may not be considered appropriate to share outside the agency.

### Outcomes

When this phase is complete, the end result is an easy to understand description of what the FR system is to achieve.

## Requirements Gathering

### Goal

The goal of this phase is to turn the Business Case into requirements that can be understood by vendors and ensure the purchased FR system is fit for purpose. This knowledge forms the bridge between the Business Case and the Proposal and Procurement process that follows.

In the Requirements Gathering phase, an initial set of requirements of the intended FR system is created based on the information presented in the Business Case. Key points in this phase are:

- What specific information needs to be known to properly translate the Business Case into a technical system specification that can be reliably and confidently presented in an official proposal for bidders?
- What are the constraints?
- What specific questions regarding FR systems need to be asked?
- What Information Technology (IT) based questions need to be asked?
- What is lacking in the Business Case that may need to be revisited or clarified?
- Which requirements are fundamental and which are good to have but not vital? In other words, delineate the *must haves* from the *nice to haves*.

### Intended Audience

The intended audience of the FISWG documents covering this phase is the technically and operationally oriented members of the group or team responsible for the overall system as defined by the Agency.

### Outcomes

When this phase in the commissioning process is complete:

- The description of the Business Case should be traceable into the system requirements.
- There should be enough detailed information to prepare a system proposal.
- System costs areas should be defined or at least identified.
- Service level agreements that must be clearly defined in the proposal should be identified.
- The users of the system should be able to understand how the described system will affect their operations at a high level.
- There should be agreement across the Agency that the information defined is appropriate and accurate.

## Proposal and Procurement

### Goal

The goal of this phase is to prepare a formal solicitation (e.g., Request For Information (RFI), Request For Proposal (RFP)) based on the Business Case and findings of the requirements gathering phase. The solicitation forms the basis for a systematic evaluation of the proposed FR solutions.

Key points in this phase are:

- What requirements does a potential bidder have to cover or meet?
- What timelines are present for the FR system deployment?
- Determine if responses meet requirements.
- Assess the performance of each system and select a system for procurement.
- What long term technical and business issues should be covered?
- How to protect the business value of the system and ensure vendors are held accountable?
- Plan for revision and clarification of the Business Case and Requirements.

**Intended Audience**

The intended audience of the FISWG documents concerning this phase is the business oriented portion of the group or team responsible for the overall system as defined by the Agency.

**Outcomes**

When this phase is complete:

- There should be an RFI or RFP that vendors can review. This should mandate a defensible cost of goods for the entire FR system for the length of the contract period.
- There should be broad consensus across the Agency that the information in the RFI or RFP is appropriate and properly protects the interests of the Agency.
- The approach by which the FR system will be selected and measured by the Agency will be known.

**Deployment Planning****Goal**

The goal of this phase is to successfully deploy a system that meets all the criteria laid out in the preceding phases, done in a manner that minimizes risk.

In the Deployment Planning phase, the Agency creates a deployment plan of an operational FR system. Key points in this phase are:

- Should a limited deployment be done before large scale deployments?
- How should the deployment be staged? Are there fundamental key issues that need to be resolved before more work is done?
- How will training be done?
- How will the initial system be confirmed as meeting the business and design goals?

**Intended Audience**

The intended audience of the FISWG documents concerning this phase is the technical deployment teams, installers, system administrators, and users of the system.

**Outcomes**

When this phase is complete:

- The deployment approach is understood and accepted across the Agency.
- The Agency should have a clear idea of how the deployment will progress along a timeline with known dependencies.
- User training integration and techniques are defined and a user group established.
- Other dependent agencies are notified and awaiting early results.
- Early “wins” are identified and “lessons learned” recorded.
- Acceptance test plans are defined and traceable to the RFP.

**Operations and Maintenance****Goal**

The goal of this phase is to have the Agency successfully manage an FR system extracting the maximal business value that is expected or achievable.

In the Operations and Maintenance phase, the Agency prepares to monitor the FR system throughout its expected life-span. Key points in this phase are:

- What types of proof need to be extracted to defend the original ROI?
- What needs to be done to ensure the system performance is maintained and optimized?
- How is the system transitioned or upgraded?
- How do you ensure responsiveness from vendors on system support while avoiding dependencies?
- How is user group feedback incorporated into system evolution?

**Intended Audience**

The intended audience of the FISWG documents in this phase is the business analysts, system administrators, and users of the system.

**Outcomes**

Because this phase will continue for the life of the project, the following outcomes should be well known and actionable:

- The intended audience should have a strategy for how FR system performance will be evaluated.
- The agency should have clear engagement rules with the vendors on how to get adequate system support.
- Processes are in place verifying critical data is retained and protected.
- A review of this document should solidify the linkages across the complete commissioning process from Business Case to Operations and Maintenance.

**Terms needed for this document as it is now:**

Facial Recognition Searching System (FR)  
Information Technology (IT)  
Service level agreements (SLA)  
Request for information (RFI)  
Formal request for proposal (RFP)

## Reference List

FISWG documents can be found at:

[www.FISWG.org](http://www.FISWG.org)

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