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Section 4

Guidelines for Specifications, Procurement, Deployment, and Operations of Facial Recognition Systems

3 **Scope of Facial Recognition System Guidelines**

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

- 6 ▪ Business Case Definition
- 7 ▪ Requirements Gathering
- 8 ▪ Proposal and Procurement
- 9 ▪ Deployment Planning
- 10 ▪ Operations and Maintenance

11 Each section provides an overview of relevant topics and key questions to be addressed at that particular phase in the
12 commissioning process. As the purpose of this document is to give a general idea of the process of commissioning
13 an FR system, a more detailed treatment of each section's topics will be provided in subsequent FISWG documents.
14 The work herein reflects lessons learned and best practices gathered by FISWG. This document is not intended to be
15 an in-depth study of FR systems, a review of facial algorithms, a buyer's guide to FR systems, nor a standard on the
16 design and deployment of FR systems. The intended audiences of this document are:

- 17 ▪ Agencies that have not yet deployed, but may be considering deploying, an FR system
- 18 ▪ Agencies that plan to deploy an FR system
- 19 ▪ New users of an FR system
- 20 ▪ Any agency or user who wishes to gain a broader understanding of FR system concepts

21 In this document, the term "agency" refers to the organization responsible for the FR system. The term "user" refers
22 to those who utilize or support the FR system.

23 **Business Case Definition**

24 **Goal**

25 The goal of the Business Case Definition phase is to ensure the agency is capable of stating the business case and
26 discussing operational scenarios for the FR system. This knowledge will serve as the basis for the following phases
27 because it forms the justification for the entire system. It will also allow the agency to selectively discuss system
28 specifics with users, subject matter experts (SMEs), and potential vendors.

29 The first step in commissioning an FR system is defining a business case that states what the system is intended to
30 do. Key questions in this phase are:

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

37 **Intended Audience**

38 The intended audience of this phase is the entire group or team responsible for the overall system, as defined by the
39 agency. The information given in or derived from business case documents could be considered proprietary to the
40 host agency and may not be considered appropriate to share outside the agency.

41 **Outcome**

42 When this phase is complete, the end result is a clear description of what the FR system is to achieve.

43 **Requirements Gathering**

44 **Goal**

45 The goal of the requirements gathering phase is to turn the business case into requirements that can be understood by
46 vendors and ensure the purchased FR system is suitable for its intended purpose. This knowledge gained in this
47 phase forms the bridge between the Business Case Definition and the Proposal and Procurement process that
48 follows.

49 In this phase, an initial set of requirements of the intended FR system is created based on the information presented
50 in the business case. Key questions in this phase are:

- 51
- 52 ▪ What specific information needs to be known to properly translate the business case into a technical
 - 53 system specification that can be presented in an official request for proposal for vendors?
 - 54 ▪ What is lacking in the Business Case that may need to be revisited or clarified?
 - 55 ▪ Which requirements are fundamental and which are good to have but not vital? In other words,
 - 56 prioritize the system requirements.
 - 57 ▪ What constraints exist?
 - 58 ▪ What specific questions regarding FR systems need to be asked?
 - 59 ▪ What Information Technology (IT) based questions need to be asked?

60 **Intended Audience**

61 The intended audience of this phase is comprised of the technically and operationally oriented members of the group
62 or team responsible for the overall system, as defined by the agency.

63 **Outcome**

64 When this phase in the commissioning process is complete:

- 65
- 66 ▪ The description of the business case should be traceable in the system requirements.
 - 67 ▪ There should be enough detailed information to prepare a system proposal.
 - 68 ▪ System cost areas should be defined or at least identified.
 - 69 ▪ Service level agreements that must be clearly defined in the proposal should be identified.
 - 70 ▪ The system users should be able to understand how the described system will affect their operations at
 - 71 a high level.
 - 72 ▪ There should be agreement across the Agency that the information defined is appropriate and accurate.

73 **Proposal and Procurement**

74 **Goal**

75 The goal of this phase is to prepare a solicitation that addresses key areas in the deployment and support of the FR
76 system. This step builds on the operational business case and will form the basis for evaluating the proposed FR
77 system(s).

78 In the Proposal and Procurement phase, a request for information (RFI) or a formal request for proposal (RFP) is
79 prepared on the foundation of the Business Case Definition and Requirements Gathering phases. Key questions in
80 this phase are:

- 81
- 82 ▪ What requirements does a potential bidder have to cover or meet?
- 83 ▪ What is the timelines for the FR system deployment?
- 84 ▪ What long-term technical and business issues should bidders address?
- 85 ▪ How can the agency protect the business value of the system and ensure vendors are held accountable?
- 86 ▪ What is lacking in the business case or system requirement that may need to be revisited or clarified?

87 **Intended Audience**

88 The intended audience of this phase is the business-oriented portion of the group or team responsible for the overall
89 system, as defined by the agency.

90 **Outcome**

91 When this phase is complete:

- 92
- 93 ▪ There should be an RFI or RFP that vendors can review. This should mandate a defensible cost of
94 goods for the entire FR system for the length of the contract period.
- 95 ▪ There should be broad consensus across the agency that the information in the RFI or RFP is
96 appropriate and properly protects the interests of the agency.
- 97 ▪ The approach by which the agency will select and measure the FR system will be clearly stated.

98 **Deployment Planning**

99 **Goal**

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

102 In the Deployment Planning phase, the agency creates a deployment plan of an operational FR system. Key
103 questions in this phase are:

- 104
- 105 ▪ Should the agency try a limited deployment before large scale deployments?
- 106 ▪ How should the agency stage the deployment? Are there fundamental issues that must be resolved
107 before more work is done?
- 108 ▪ How will the agency conduct training?
- 109 ▪ How will the agency evaluate initial system performance?

110 **Intended Audience**

111 The intended audiences of this phase are the technical deployment teams, installers, system administrators, and users
112 of the system.

113 **Outcome**

114 When this phase is complete:

- 115
- 116 ▪ The deployment approach should be understood and accepted across the agency.
- 117 ▪ The agency should have a clear idea of how the deployment will progress along a timeline with known
118 dependencies.
- 119 ▪ User groups should be established and training integration and techniques should be defined.
- 120 ▪ Other dependent agencies are notified and awaiting early results.
- 121 ▪ Early successes are identified and lessons learned recorded.
- 122 ▪ Acceptance test plans are defined and traceable to the RFP.

123 **Operations and Maintenance**

124 **Goal**

125 The goal of this phase is for the agency to successfully manage an FR system and receive the maximum benefit.

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

- 128
- 129 ▪ What types of proof need to be extracted to defend the original ROI?
 - 130 ▪ What needs to be done to ensure the system performance is maintained and optimized?
 - 131 ▪ How is the system transitioned or upgraded?
 - 132 ▪ How can the agency ensure responsiveness from vendors on system support while avoiding
133 dependencies?
 - 134 ▪ How is user group feedback incorporated into system evolution?

135 **Intended Audience**

136 The intended audiences of this phase are the business analysts, system administrators, and users of the system.

137 **Outcome**

138 When this phase is complete:

- 139
- 140 ▪ The intended audience should have a strategy for evaluating FR system performance.
 - 141 ▪ The agency should have clear engagement rules with the vendors on how to get adequate system
142 support.
 - 143 ▪ Processes for retaining and protecting critical data should be in place.
 - 144 ▪ Upon review, the linkages across the complete commissioning process from the Business Case
145 Definition phase to the Operations and Maintenance phase should be solidified.

146

Reference List

FISWG documents can be found at: www.FISWG.org

Section	Title
Section 1	Glossary
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