

Content



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This report presents the findings of a high level evaluation of the Student Financial Aid (SFA) Modernization Blueprint and EASI architectural deliverables against the General Accounting Office (GAO) criteria. The overall blueprint evaluation and the corresponding details for the rankings are included in this document.

■ GAO Evaluation Criteria

The criteria for the evaluation was gathered from discussions with GAO representatives. GAO cited the Chief Information Officers Council Federal Enterprise Architecture Framework document as a useful guide for agencies. The GAO is primarily looking for evidence that key issues were thought through, that key architectural elements were analyzed, and that the linkages between architectural elements were defined.

■ Overall Blueprint Evaluation

The business, data, application, and technology architectural elements of the SFA Modernization Blueprint lack full compliance with baseline architecture criteria and linkage between adjacent elements. Overall, the target elements comply with GAO criteria. The transition plan and architecture management are generally not compliant with GAO criteria. The SFA Investment Management Process is compliant with GAO criteria.

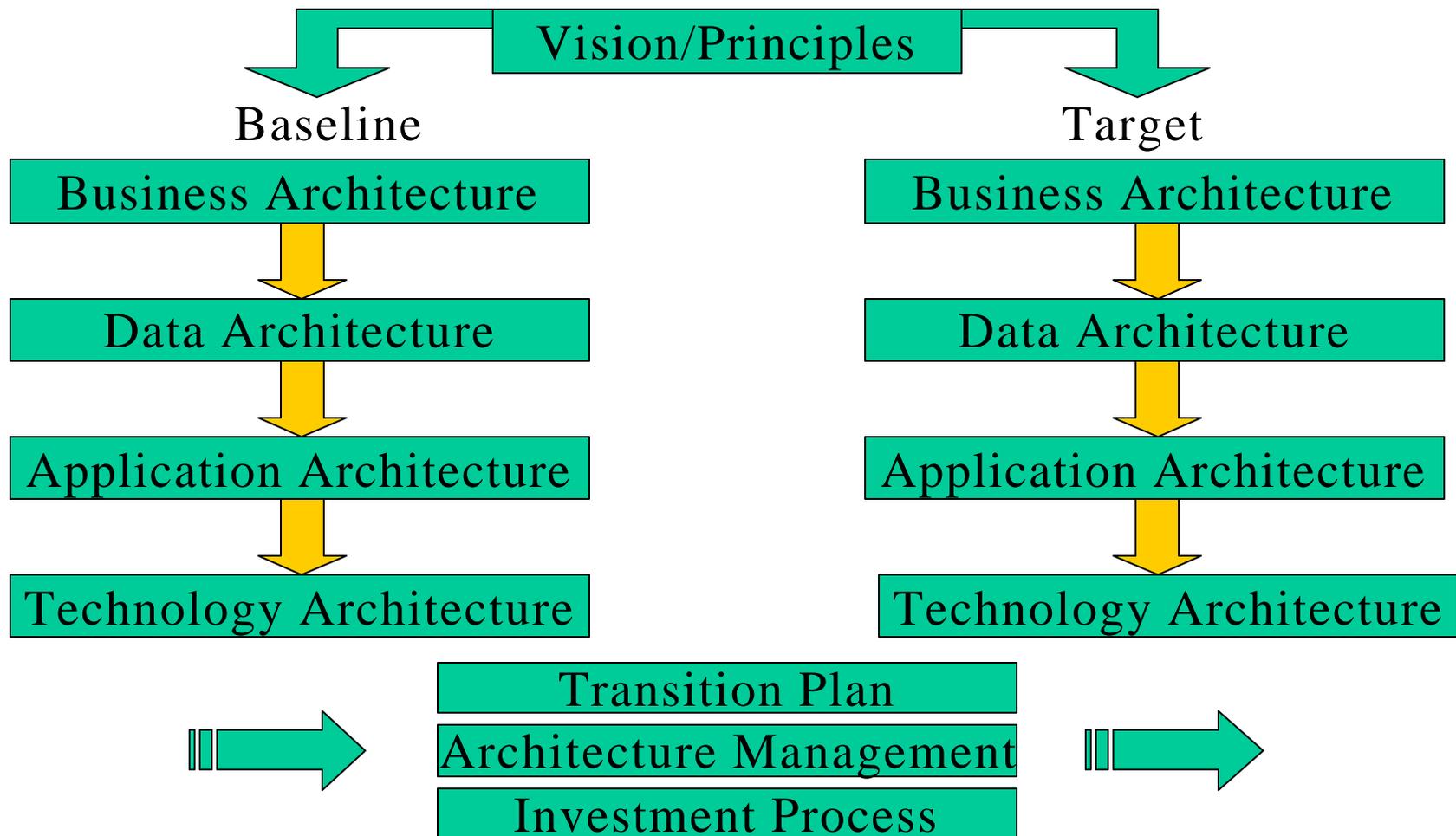
■ Recommendations

The majority of the gaps between GAO criteria and the SFA Modernization Blueprint can be addressed by leveraging prior work under project EASI and updating the blueprint as appropriate. The recommendations have been included in the main deliverable, 4.1.1.

The Chief Information Officers Council Federal Enterprise Architecture Framework is a useful guide for defining the key architectural elements for meeting GAO Criteria.



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Summary of Evaluation Results



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Key

-  – no evidence of compliance found
-  – partial compliance
-  – full compliance
- N/A^{R#} – Not Applicable; see corresponding reason

R1: Documentation did not exist to perform comparison.

R2: Referring to slide B-3, there is no forward linkage from technical architecture.

<u>Architecture Element</u>	<u>Compliance Level</u>		
	<u>Baseline</u>	<u>Target</u>	<u>Linkage</u>
Vision/Principles	N/A ^{R1}		
Business Architecture			
Data Architecture			
Application Architecture			
Technology Architecture			N/A ^{R2}
Transition Plan			
Architecture Management			
Investment Process			

Once the GAO criteria were determined and the architectural deliverables evaluated, the detailed analysis was summarized and the reference material documented. An example of how to read the detailed analysis matrix is shown below.



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The reference material (chapter, section, and pages) used to evaluate GAO criteria

Key	
	- no evidence of compliance found
	- partial compliance
	- full compliance
N/A ^{R#} - Not Applicable; see corresponding reason	

R1: Documentation did not exist to perform comparison.

Framework Category

	<u>GAO Criteria</u>	<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
Baseline Architecture	N/A ^{R1}		
Target Architecture	<ul style="list-style-type: none"> Vision as driver of business and architecture Evidence of thought process to justify approach 	<ul style="list-style-type: none"> Imagine This - Chpt 1 pgs. 3-6 Major Changes - Chpt 3 pg. III.B-3 to III.B-6 	<ul style="list-style-type: none"> SFA Enterprise IT Architecture Framework: Business Drivers and Architecture Principles pg. 6-11
Linkage to Next Element	<ul style="list-style-type: none"> Guiding principles link vision to architectural decisions 	<ul style="list-style-type: none"> No principles but some discussion of vision and technology 	<ul style="list-style-type: none"> SFA Enterprise IT Architecture Framework: Business Drivers and Architecture Principles pg 12-23

Criteria for architecture element

Ranking

Vision/Principles Evaluation



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Key

- no evidence of compliance found
- partial compliance
- full compliance

N/A^{R#} - Not Applicable; see corresponding reason

R1: Documentation did not exist to perform comparison.

	<u>GAO Criteria</u>	<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
Baseline Architecture	N/A ^{R1}		
Target Architecture	<ul style="list-style-type: none"> Vision as driver of business and architecture Evidence of thought process to justify approach 	<ul style="list-style-type: none"> Imagine This - Chpt 1 pgs. 3-6 Major Changes - Chpt 3, Section B, pg. III.B-3 to III.B-6 	<ul style="list-style-type: none"> SFAP Enterprise IT Architecture Framework: Business Drivers and Architecture Principles pg. 6-11
Linkage to Next Element	<ul style="list-style-type: none"> Guiding principles link vision to architectural decisions 	<ul style="list-style-type: none"> No principles but some discussion of vision and technology 	<ul style="list-style-type: none"> SFAP Enterprise IT Architecture Framework: Business Drivers and Architecture Principles pg 12-23

Business Architecture Evaluation



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Key	
	– no evidence of compliance found
	– partial compliance
	– full compliance
N/A ^{R#} – Not Applicable; see corresponding reason	

	<u>GAO Criteria</u>	<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
Baseline Architecture	<ul style="list-style-type: none"> All business functions identified Business functions decomposed Who, what, and where covered in function descriptions 		<ul style="list-style-type: none"> Project EASI/ED Business Area Requirements Section 2.3
Target Architecture	<ul style="list-style-type: none"> Same as Baseline criteria above 		<ul style="list-style-type: none"> Project EASI/ED Business Area Requirements Section 2.4 Target Architecture, Chpt 2
Linkage to Next Element	<ul style="list-style-type: none"> Business functions logically tied to data architecture 		<ul style="list-style-type: none"> Chpt 4, Sections B, pg IV.B-1 through 178

Data Architecture Evaluation



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Key	
	– no evidence of compliance found
	– partial compliance
	– full compliance
N/A ^{R#} – Not Applicable; see corresponding reason	

	<u>GAO Criteria</u>		<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
Baseline Architecture	<ul style="list-style-type: none"> Associate data with business functions Identify location of data Identify redundant and inconsistent data 		<ul style="list-style-type: none"> No evidence found 	<ul style="list-style-type: none"> Project EASI/ED Architecture Baseline Characterization Section 2
Target Architecture	<ul style="list-style-type: none"> Associate data with business functions Identify location of data Resolve data redundancies and/or inconsistencies 		<ul style="list-style-type: none"> Chpt 4, Section B.6 & B.7, pg IV.B-50 through 175 	<ul style="list-style-type: none"> Project EASI-ED Logical Data Model Version 2.0, Section 4 Target Architecture Chpt 3
Linkage to Next Element	<ul style="list-style-type: none"> Data tied into the application architecture, evidences an understanding of how data drives application design 		<ul style="list-style-type: none"> Chpt 4, Section D, pg IV.D-1 through 51 Application modules not identified 	

Application Architecture Evaluation



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Key	
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	- partial compliance
	- full compliance
N/A ^{R#} - Not Applicable; see corresponding reason	

	<u>GAO Criteria</u>	<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
Baseline Architecture	<ul style="list-style-type: none"> Describe in detail current applications, input data, output data and any data interchange 	<ul style="list-style-type: none"> Chpt 4, Section B.8, pg. IV.B-176 through 177 Limited detail 	<ul style="list-style-type: none"> Project EASI/ED Architecture Baseline Characterization Section 4
Target Architecture	<ul style="list-style-type: none"> Describe how applications will access and distribute data 	<ul style="list-style-type: none"> Chpt 4, Section B.6, B.7, & C, pg IV.B-50 through 175 and IV.C-1 through 70 No data issues identified 	<ul style="list-style-type: none"> Project EASI/ED Architecture Services Definition Version 2.0 Section 3 Target Architecture Chpt 4
Linkage to Next Element	<ul style="list-style-type: none"> Drives technology selection 	<ul style="list-style-type: none"> Chpt 4, Section D, pg IV.D-1 through 51 Only a high level of detail 	

Technology Architecture Evaluation



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Key	
	– no evidence of compliance found
	– partial compliance
	– full compliance
N/A ^{R#}	– Not Applicable; see corresponding reason

R2: Referring to slide B-3, there is no forward linkage from technical architecture.

	<u>GAO Criteria</u>	<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
Baseline Architecture	<ul style="list-style-type: none"> Identify all technologies supporting existing applications 	 <ul style="list-style-type: none"> No evidence found 	<ul style="list-style-type: none"> Project EASI/ED Architecture Baseline Characterization Section 5
Target Architecture	<ul style="list-style-type: none"> Target technology architecture should flow naturally from preceding architectures and linkages and support overall goals 	 <ul style="list-style-type: none"> Chpt 4, Section D.2 & D.3, pg IV.D-4 through 55 	<ul style="list-style-type: none"> Target Architecture Chpt 5, 6
Linkage to Next Element	<ul style="list-style-type: none"> N/A^{R2} 		

Transition Plan Evaluation



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Key

-  – no evidence of compliance found
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-  – full compliance
- N/A^{R#} – Not Applicable; see corresponding reason

<u>GAO Criteria</u>	<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
<ul style="list-style-type: none"> Gantt chart identifying specific tasks, task relationships, high level task assignments and sustaining activities for continued operations during transition 	<div style="text-align: center;"></div> <ul style="list-style-type: none"> Chpt 5, Section D, pg V.D-1 through 62 No Gantt chart defining logical project relationships No assignment of tasks No sustaining activities identified 	<ul style="list-style-type: none"> Project EASI-ED Transition Plan

Architecture Management Evaluation



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	– no evidence of compliance found
	– partial compliance
	– full compliance
N/A ^{R#} – Not Applicable; see corresponding reason	

<u>GAO Criteria</u>	<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
<ul style="list-style-type: none"> Documented process and approach for maintaining and evolving the architecture 	 <ul style="list-style-type: none"> No evidence found 	<ul style="list-style-type: none"> Target Architecture Chpt 7

Investment Process Evaluation



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Key

-  – no evidence of compliance found
-  – partial compliance
-  – full compliance
- N/A^{R#} – Not Applicable; see corresponding reason

R1: Documentation did not exist to perform comparison.

<u>GAO Criteria</u>	<u>Blueprint Compliance</u> (Version 9/30/99)	<u>Other SFA Supporting Work</u>
<ul style="list-style-type: none"> • Described in GAO publication on: “Assessing Risks and Returns: A Guide for Evaluating Federal Agencies’ IT Investment Decision-making”, Version 1, February 1997, GAO/AIMD-10.1.13 	<ul style="list-style-type: none"> • N/A^{R1} 	<ul style="list-style-type: none"> • SFA’s IT Investment process is currently being developed using this criteria as a guide