採用 ACMM 成熟度模型之研究–以 S 機構為例
A Study on Enterprise Architecture Capability Maturity Model - Case Study of S Institution

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摘　要

資訊科技應用的蓬勃發展，企業與組織對資訊系統與技術也相當重視，以資訊科技來領導整體企業架構的模式，已蔚為風潮的應用在現今業界中，也讓企業架構成熟度備受重視。目前「企業架構(Enterprise Architecture, EA)」領域已逐漸受到重視，但對於以「企業架構成熟度模型(Enterprise Architecture Maturity Model, EAMM)」量測「企業架構成熟度(Enterprise Architecture Maturity, EAM)」的相關研究為數仍少。

本研究以此為題，除了對 GAO (United States General Accounting Office)、E2AMM (Extended Enterprise Architecture Maturity Model)、NASCIO (National Association of State Chief Information Officers)、OSIMM (The Open Group Service Integration Maturity Model)以及 ACMM (Enterprise Architecture Capability Maturity Model)這 5 種成熟度模型進行相關文獻彙整之外，本研究也取用 ACMM 作為量測成熟度框架，以教育機構之 IT 部門作為量測對象，教育機構之高階主管藉由量測結果，可清楚了解企業架構(EA)與 IT 整體現狀(As-Is)之外，也可幫助學校調整企業架構(EA)與 IT 治理藍圖之規劃(To-Be)。

關鍵詞：企業架構、企業架構成熟度模型、企業架構成熟度、架構能力成熟度。

1. 緒論

資訊管理學會(SIM)多年針對 IT 管理者關注焦點所做的研究顯示，資訊系統策略規劃(ISP)、企業架構(EA)等議題倍受 IT 管理者關注，如表 1 所示，而這也反映出企業對企業架構成熟度(EAM)的認同與需求，用以評估企業架構(EA)在企業中發展的階段。([7]、[8]、[9]、[10]、[11]、[12])

表 1 SIM 歷年全球資訊主管關注 IT 議題彙整

CEO/CIO 關注 IT 議題	歷年評比排名				
	2015	2014	2013	2012	2011
IT 與企業策略對齊 IT & Business Align	1	1	1	2	1
企業流程治理 Business Process Gov	6	13	6	4	3
資訊科技策略規劃 IT Strategic Planning	19	27	12	7	6
企業架構發展 EA Development	15	18	15	10	8

目前企業架構(EA)領域已逐漸受到重視，但對於以企業架構成熟度模型(EAMM)量測企業架構成熟度(EAM)的相關研究較少。企業與組織為了有效的實施企業架構(EA)，完成對企業架構(EA)的架構治理、維護等各階段進行管理，並且也需要對企業架構(EA)總體規劃的過程與構面進行管評估及驗證，因此藉由企業架構成熟度模型(EAMM)的導入進行評估與量測，對企業提出企業架構成熟度(EAM)的現況與指導方針。

本研究對 GAO、E2AMM、NASCIO、OSIMM 以及 ACMM 進行相關文獻彙整之外，並以 S 教育機構為對象，取用 ACMM 作為量測成熟度之框架，進行企業架構成熟度(EAM)評量，量測 S 機構業架構成熟度(EAM)之現況(As-Is)。

2. 相關文獻探討

企業與組織在施行及治理企業架構(EA)時，會使用企業架構成熟度(EAM)作為量測的工具，評估與分析企業與組織企業架構(EA)的現況，幫助企業與組織提出有效的企業架構(EA)規劃，協助企業與組織進入下一個企業架構成熟度(EAM)的階段。

本研究文獻探討，以 GAO、E2AMM、NASCIO、OSIMM 以及 ACMM 這 5 種企業架構成熟度模型(EAMM)進行文獻蒐集及概述。

2.1 GAO

GAO (U.S. Government Accountability Office)成熟度模型，是架構在企業架構管理成熟度框架(Enterprise Architecture Management Maturity Framework, EAMMF)內，企業及組織在量測企業架構(EA)的發展應用範圍，以及企業架構(EA)的實施治理程度，可使用 EAMMF 為參考框架，其量測構面包含了對企業架構(EA)認知的建立、企業架構(EA)的發展與完整程度，及企業架構(EA)管理的基本程度，也包含了對企業架構(EA)治理變革，並且 EAMMF 也是提高企業及組織的企業架構成熟度(EAM)的工具。

EAMMF 是由 3 個基本部分所組成，分別為 5 個層級的企業架構的成熟度階段(Maturity Stage)，和 4 項分類的成功關鍵屬性(Critical Success Attributes)，以及成熟度階段發展過程中與成功關鍵屬性的 31 項專業核心要素，這 3 部分，其對應矩陣附件 2 所示。([20]、[21]、[22])

2.2 E2AMM

由 IFEAD (Institute For Enterprise Architecture Developments)機構所提出的 E2AMM (Extended Enterprise Architecture Maturity Model)成熟度模型，所引用的企業架構框架為 E2AF (Extended Enterprise Architecture Framework)。

當企業與組織對所開發建立企業架構(EA)進行成熟度評估時，E2AMM 會對企業整體進行評估，評估範圍從業務和 IT 的發展參與，到公司高層主管(CxO)的支持，以及企業架構發展的現況，甚至於在融合企業架構之後企業對於採購和預算的現況發展進行整體的策略評估與分析。企業與組織在導入 E2AMM 評估的企業架構成熟度(EAM)時，為了辨識企業的企業架構成熟度發展狀態，將成熟度分級為 6 個發展層級，並區分出 11 項構面進行度量。其 E2AMM 對應矩陣如附件 3 所示。([4])

2.3 OSIMM

OSIMM (The Open Group Service Integration Maturity Model 是由 TOG(The Open Group)協會所提出，OSIMM 所參考引用的企業架構框架來自於開放組織架構框架(The Open Group Architecture Framework；TOGAF)。

企業與組織進行企業架構成熟度(EAM)進行評估時，業務價值、治理與組織、方法與應用、架構與資訊及基礎設施相關維度，皆是 OSIMM 所評估考量範圍。OSIMM 成熟度模型在對企業與組織進行評估時，會將企業架構成熟度(EAM)的發展分為 7 個成熟度層級；而 OSIMM 在評估企業與組織的服務導向架構(Service-Oriented Architecture, SOA)成熟度水平時，會使用 7 項重要的評估指標進行成熟度的度量(Metric)，其對應矩陣，如附件 4 所示。([16]、[18]、[19]、[30])

2.4. NASCIO

NASCIO (National Association of State Chief Information Officers)成熟度模型是同為 NASCIO 組織所提出，使用企業架構開發工具套件(Enterprise Architecture Development Tool-Kit，EADTK)作為企業架構的引用。

企業與組織使用 NASCIO 評量企業架構成熟度(EAM)時，NASCIO 會對運用企業架構的發展進行整體的分類，包含管理治理企業架構人員的角色與責任，實施企業架構的規劃、框架與整體藍圖，傳達企業架構導入的理念、所需遵循的架構規範與

統整方式，甚至於企業整體對企業架構的支持參與都在 NASCIO 模型評估範圍分類內。使用 NASCIO 評估企業與組織的企業架構成熟度(EAM)，區分為 6 個階段的成熟度發展階段，以以及企業整體策略規劃 8 項分類，其對應矩陣如附件 5 所示。([14])

2.5 ACMM

由美國商務部(United States Department of Commerce, U.S. DOC) 單位所提出的 ACMM (Enterprise Architecture Capability Maturity Model)成熟度模型，所引用的企業架構框架為 DOC EA (DOC Enterprise Architecture)。

表 2 ACMM 對應矩陣

	發展層級					
	0. 無 EA 架構	1. 初始階段	2. 開發階段	3. 已定義階段	4. 已管理階段	5. 優化階段
度量構面	1. 架構流程					
	2. 架構發展					
	3. 業務結合					
	4. 高階管理者的參與					
	5. 營運組織的參與					
	6. 架構的傳達溝通					
	7. 資訊安全					
	8. 架構治理					
	9. 資訊投資或收購策略					

在導入 ACMM 評估企業與組織的企業架構成熟度(EAM)時，為了辨識企業架構(EA)的發展及治理狀態，ACMM 以 0 至 5 層級(Level)區分成熟度，共 6 個發展層級，其成熟度發展層級如下列所示。

層級(Level)
0：無企業架構(EA)架構層級 (None)
1：初始層級 (Initial)
2：開發層級 (Under Development)
3：已定義層級 (Defined)
4：已管理層級 (Managed)
5：優化層級 (Optimized)

當企業與組織對所開發建立企業架構(EA)進行成熟度量測時，ACMM 會對相關構面進行評估，包括企業架構(EA)的架構流程與發展狀態、架構與業務結合的情形，及高階管理者的支持，甚至於資訊投資或收購策略也納入評估項目中，共區分出 9 項構面進行度量，陳述如下。

構面(Metrics)
1. 架構流程 (Architecture Process)
2. 架構發展 (Architecture Development)
3. 業務結合 (Business Linkage)
4. 高階管理者的參與 (Senior Management Involvement)
5. 營運組織的參與 (Operating Unit Participation)
6. 架構的傳達溝通 (Architecture Communication)
7. 資訊安全 (IT Security)
8. 架構治理 (Governance)
9. 資訊投資或收購策略 (IT Investment and Acquisition Strategy)

在使用 ACMM 量測企業架構(EA)的成熟度時，ACMM 的 6 層成熟度發展層級，與 9 項企業整體策略構面會進行交互對應並產生對應矩陣，其 ACMM 對應矩陣如表 2 所示，完整矩陣對應如附件 6 所示。([23]、[24]、[25]、[26]、[27]、[28]、[29])

3. 研究方法

綜合相關企業架構成熟度模型(EAMM)文獻之探討，在 U.S. DOC 所定義之 ACMM 當中，除了定義企業架構(EA)之外，也定義了資訊架構當中的資訊治理(E-Government)、資訊安全(IT Security)、資訊隱私(IT Privacy)等相關議題，本研究以此成熟度模型為論，取用 ACMM 作為量測企業架構成熟度(EAM)之參考框架，本研究之研究方法，論述其量測問卷，以及量測方式([1]、[2]、[3]、[5]、[6]、[13]、[15]、[17]、[23]、[24]、[25]、[26]、[27]、[28]、[29])。

本研究之案例組織(以下簡稱 S 機構)為大學辦理終身教育的部門，除辦理終身教育外，也有進修學士班與碩士在職專班。S 機構以資訊化著稱，並導入企業架構(EA)之理念與治理模式，校務資訊系統涵蓋各業務面向，所開發的資訊系統，因成果顯著，在眾多參訪者的懇求下也對外輸出。本研究以 S 機構 IT 資訊主管為問卷發放之對項，以 IT 資訊主管的角度，評量 S 機構現有企業架構成熟度及資訊成熟度現況。

3.1 ACMM 問卷填寫方式

由 U.S. DOC 對 ACMM 所定義之問卷規範中，企業與組織進行成熟度評量時，需對 9 項構面進行評分，評分方式是依照各構面所定義之無企業架構層級(None)、初始層級(Initial)、開發層級(Under Development)、已定義層級(Defined)、已管理層級(Managed)及優化層級(Optimized)，這 6 階成熟度層級為評分標準，依照各階段(Level)的論述，並判斷組織符合的現況(As-Is)，填入 0 至 5 分的成熟度階段評分。([23]、[24]、[25]、[26]、[27]、[28]、[29])

以架構流程(Architecture Development)構面為例，如表 3 所示，企業及組織對該構面評量其成熟度後，填入成熟度為 3 分(階段)的評分。

除了架構發展(Architecture Development)構面之外，現有 ACMM 成熟度模型當中，構面部分還分別有架構流程(Architecture Process)、業務結合(Business Linkage)、高階管理者的參與(Senior Management Involvement)、營運組織的參與(Operating Unit Participation)、架構的傳達溝通(Architecture Communication)、資訊安全(IT Security)、架構治理(Governance)，以及資訊投資或收購策略(IT Investment and Acquisition Strategy)，共有 9 項維度。([23]、[24]、[25]、[26]、[27]、[28]、[29])

表 3 架構發展構面問卷

Score	Level
3	2. Architecture Development: To what extent is the development and progression of the Operating Units' Enterprise Architecture documented? Level 0: No Enterprise Architecture documentation to speak of. Level 1: Enterprise Architecture processes, documentation and standards are established by a variety of ad hoc means, and are localized or informal. Level 2: IT Vision, Principles, Business Linkages, Baseline, and Target Architecture are documented. Architecture standards exist, but not necessarily linked to Target Architecture. Technical Reference Model and Standards Profile framework established. Level 3: Gap Analysis and Migration Plan are completed. Architecture standards linked to Business Drivers via Best Practices, IT Principles and Target Architecture. Fully developed Technical Reference Model and Standards Profile. Level 4: Enterprise Architecture documentation is updated on a regular cycle to reflect the updated Enterprise Architecture. Business, Information, Application and Technical Architectures defined by appropriate de-jure and de-facto standards. Level 5: Defined and documented Enterprise Architecture metrics are used to drive continuous process improvements. A standards and waivers process are used to improve architecture development process improvements.

在營運組織的參與(Operating Unit Participation)構面部分，ACMM 將其分別定義了組織接受程度(Enterprise Architecture process accepted)，以及架構流程的成效(Enterprise Architecture process an effort representative)兩項議題，如表 4 所示。

在 ACMM 相關定義文件中，對於架構的傳達溝通(Architecture Communication)構面部分，共區分為 3 項不同議題，分別唯架構的作法(Enterprise Architecture practice documented)、提供企業架構方式 (Enterprise Architecture made available electronically)，以及教育訓練(education on the Enterprise Architecture)，如表 5 所示。([23]、[24]、[25]、[26]、[27]、[28]、[29])

表 4 營運組織參與構面問卷

Score	Level
	5A. Operating Unit Participation: To what extent is the Enterprise Architecture process accepted by the Operating Unit?
	5B. Operating Unit Participation: To what extent is the Enterprise Architecture process an effort representative of the whole organization?

表 5 架構的傳達溝通構面問卷

Score	Level
	6A. Architecture Communication: To what extent are the decisions of Enterprise Architecture practice documented?
	6B. Architecture Communication: To what extent is the content of the Enterprise Architecture made available electronically to everybody in the organization?
	6C. Architecture Communication: To what extent is architecture education done across the business on the Enterprise Architecture process and contents?

3.2 ACMM 問卷計算方式

在 ACMM 所定義問卷統計計算，採用敘述統計方式，在加總完成後取得其平均值；問卷中，在營運組織的參與(Operating Unit Participation)構面，以及架構的傳達溝通(Architecture Communication)構面，ACMM 又分別定義 2 項及 3 項不同議題，因此，會先各自取得平均值，在與另外 7 項構面進行敘述統計，其問卷評分範例，如表 6 所示。([23]、[24]、[25]、[26]、[27]、[28]、[29])

表 6 ACMM 問卷評分範例

Architecture Level	Characteristic Accomplished
1	3
2	2
3	4
4	3
5 = (5A+5B)/2	1 = (1+1)/2
6 = (6A+6B+6C)/3	3 = (2+3+4)/3
7	5
8	2
9	1
Total Score / Number of Characteristics	24/9 = 2.66≒2.7

4. 研究結果

本研究以 S 機構之 IT 部門為問卷發放對項，以 IT 資訊主管的角度，評量 S 機構現有企業架構成熟度(EAM)及資訊成熟度現況(As-Is)。

本研究共發放及回收 5 分問卷，依照問卷編號，與各項評量構面為度，呈現評量後成熟度階段，如表 7 所示。

研究結果顯示，在 9 項架構構面當中，架構流程(Architecture Process)構面，取得成熟度的平均為第 2 層級，並且 5 位 IT 管理者一致認為，S 機構正在發展企業架構(EA)流程。在營運組織的參與(Operating Unit Participation)構面，取得成熟度的平均為第 2 階段，結果顯示出，目前 S 機構的特定部門已接受使用企業架構(EA)規範及制定 S 機構的組織流程。在架構的傳達溝通(Architecture Communication)構面，取得成熟度的平均為第 1 層級，顯示出 S 機構已在網頁呈列新版本的企業架構(EA)文件，並且 S 機構對於企業架構(EA)的流程改進，較疏於溝通。在架構發展(Architecture Development)構面，取得成熟度層級的平均為 1.6，顯示出 S 機構的企業架構(EA)流程的文件與標準雖已被制定與建立，但在 IT 的願景、準則、業務關聯、基線和目標架構還需再被確認。在業務結合(Business Linkage)構面，取得成熟度層級的平均為 0.6，顯示 S 機構需再確認企業架構(EA)與業務策略的結合，或與業務驅動之間的結合。在高階管理者的參與(Senior Management Involvement)構面，取得成熟度層級的平均為 1.6，顯示出 S 機構已經有特定的團隊參與制定企業架構(EA)的流程，但對於企業架構(EA)相關知識所帶來效益需再確認。在資訊安全(IT Security)構面，取得成熟度層級的平均為 2.6，顯示 S 機構已明確定義資訊安全架構的角色和責任，對於資訊安全架構標準規範整合至企業架構(EA)當中，需再進行確認。在架構治理(Governance)構面，取得成熟度層級的平均為 3.8，顯示 S 機構對於 IT 治理，已有相當的投入，並且已有明確的記載，但 S 機構內業務流程與企業架構(EA)之間的差異與對齊仍需再確認。在資訊投資或收購策略(IT Investment and Acquisition Strategy)構面，取得成熟度層級的平均為 2.8，顯示 S 機構已有制定部分標準規範在 IT 投資或收購策略上，但全面完整性及正規的 IT 投資或收購策略需再確認。

表 7 S 機構 ACMM 評量總表

構面\填答者	A	B	C	D	E	構面均值 Round	排名
架構流程	2	2	2	2	2	2	4
架構發展	2	1	2	1	2	1.6	6
業務結合	1	0	1	1	0	0.6	9
高階管理者參與	2	1	2	2	1	1.6	6
營運組織的參與 (5A+5B)/2&Round	2	2	2	2	2	2	4
架構的傳達溝通 (6A+6B+6C)/3&Round	1	1	1	1	1	1	8
資訊安全	3	2	3	2	3	2.6	3
架構治理	3	4	4	4	4	3.8	1
資訊投資收購策略	3	2	3	3	3	2.8	2
填答者加總平均 (Round)	2.1	1.7	2.2	2	2	2	

藉由 ACMM 作為成熟度評量框架，並以 S 機構之 IT 部門為對象，如表 11 所示，S 機構目前(As-Is)的企業架構成熟度(EAM)為 2 分的均分值，在 6 階成熟度層級中，趨近於中間成熟度階段。

5. 結論及建議

綜合本研究 GAO、E2AMM、NASICO、OSIMM 及 ACMM 成熟度模型，分別對參考框架、成熟度層級階段、成熟度評估維度、成熟度對應矩陣要素、複雜度，以及運用於營運組織的相容性、有效性及適用性進行彙整與比較，如表 8 所示。表中，比較企業架構成熟度模型(EAMM)運用在一般企業組織內，可得知 E2AMM、OSIMM 及 ACMM 成熟度模型較適用，在理解的容易程度部分，ACMM 成熟度模型是相較於 E2AMM 及 OSIMM 成熟度模型，簡明且便於了解。

表 8 EAMM 彙整及比較列表

EAMM	GAO	E2AMM	NASICO	OSIMM	ACMM
參考框架	EAMMF	E2AF	EADTK	TOGAF	DOC EA
成熟度層級階段	5 Stages	6 Levels	6 Program Stages	7 Levels	6 Levels
成熟度評估維度	4 Critical Success Attributes	11 Metrics	8 Categories	7 Metrics	9 Metrics
成熟度對應矩陣要素	31 elements	66 elements	40 elements	49 elements	54 elements
複雜度	複雜	一般	一般	一般	簡易
運用於營運組織相容性	一般	較相容	較不相容	較相容	較相容
運用於營運組織有效性	普通	較有效	配合 EADTK	較有效	較有效
運用於營運組織適用性	31 項專業核心要素運用	較適用	一般	較適用	較適用

透過本研究所取用 ACMM 作為成熟度評量框架，以 S 機構之 IT 部門為對象進行量測，如表 7 所示，在彙總 S 機構在構面階段之得分，可以得知 S 機構的架構治理(Governance)、資訊投資或收購策略(IT Investment and Acquisition Strategy)、資訊安全(IT Security)、營運組織的參與(Operating Unit Participation)及架構流程(Architecture Process)這 5 項構面，是 ACMM 中較高的前 5 項構面，後續，S 機構在未來(To-Be)治理實施企業架構(EA)時，可調整治理範圍與方向。

企業與組織進行企業架構成熟度模型(EAMM)的導入評量時，會考量到企業與組織所處於的環境型態，企業與組織本體的情境脈絡皆不相同，因此，藉由本研究探討的 GAO、E2AMM、NASICO、OSIMM 或是 ACMM 這 5 種 EAMM 分析比較，可作為參考依據，依照企業與組織本體的需求，對 EAMM 各階段的評估進行調整與制定。

經由本研究之論述，各業界組織進行企業架構成熟度(EAM)評量時，可以此為論述與觀點，依照組織整體之需求，量身訂做符合於企業本體的所需量測工具。

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附件 1 – ACMM 問卷

Score	Level
	1. Architecture Process: Is there an established Enterprise Architecture process? Level 0: Architecture process not established. Level 1: Ad-hoc and localized architecture process defined. Level 2: Basic Enterprise Architecture Process program is documented based on OMB Circular A-130 and Department of Commerce Enterprise Architecture Guidance. The architecture process has developed clear roles and responsibilities. Level 3: The architecture is well defined and communicated to IT staff and business management with Operating Unit IT responsibilities. The process is largely followed. Level 4: Enterprise Architecture process is part of the culture, with strong linkages to other core IT and business processes. Quality metrics associated with the architecture process are captured. These metrics include the cycle times necessary to generate Enterprise Architecture revisions, technical environment stability, and time to implement a new or upgraded application or system. Level 5: Concerted efforts to optimize and continuously improve architecture process.
	2. Architecture Development: To what extent is the development and progression of the Operating Units' Enterprise Architecture documented? Level 0: No Enterprise Architecture documentation to speak of. Level 1: Enterprise Architecture processes, documentation and standards are established by a variety of ad hoc means, and are localized or informal. Level 2: IT Vision, Principles, Business Linkages, Baseline, and Target Architecture are documented. Architecture standards exist, but not necessarily linked to Target Architecture. Technical Reference Model and Standards Profile framework established. Level 3: Gap Analysis and Migration Plan are completed. Architecture standards linked to Business Drivers via Best Practices, IT Principles and Target Architecture. Fully developed Technical Reference Model and Standards Profile. Level 4: Enterprise Architecture documentation is updated on a regular cycle to reflect the updated Enterprise Architecture. Business, Information, Application and Technical Architectures defined by appropriate de-jure and de-facto standards. Level 5: Defined and documented Enterprise Architecture metrics are used to drive continuous process improvements. A standards and waivers process are used to improve architecture development process improvements.
	3. Business Linkage: To what extent is the Enterprise Architecture linked to business strategies or drivers. Level 0: No linkage to business strategies or business drivers. Level 1: Minimal, or implicit linkage to business strategies or business drivers. Level 2: Explicit linkage to business strategies or drivers. Level 3: Enterprise Architecture is integrated with capital planning and investment control. Explicit linkage to business drivers and information requirements. Level 4: Capital planning and investment control are adjusted based on the feedback received and lessons learned from updated Enterprise Architecture. Periodic re-examination of business drivers. Level 5: Architecture metrics are used to optimize and drive business linkages. Business involved in the continuous process improvements of IT Architecture.
	4. Senior Management Involvement: To what extent are the senior managers of the Operating Unit involved in the establishment and ongoing development of an IT Architecture? Level 0: No management team awareness or involvement in the architecture process. Level 1: Limited management team awareness or involvement in the architecture process. Level 2: Occasional/selective management team involvement in the architecture process with various degrees of commitment. Level 3: Senior-management team aware of and supportive of the enterprise-wide architecture process. Management actively supports architectural standards. Level 4: Senior-management team directly involved in the architecture review process. Level 5: Senior-management team directly involved in the optimization of the enterprise-wide architecture development process and governance.
	5A. Operating Unit Participation: To what extent is the Enterprise Architecture process accepted by the Operating Unit? Level 0: No Operating Unit acceptance. Level 1: Limited Operating Unit acceptance of the Enterprise Architecture process. Level 2: Enterprise Architecture responsibilities are assigned and work is underway. There is a clear understanding of where the organization's architecture is at present time. Level 3: Largest elements of Operating Unit show acceptance of the IT Architecture process. Level 4: The entire Operating Unit accepts and actively participates in the IT Architecture process. Level 5: Feedback on architecture process from all Operating Unit elements is used to drive architecture process improvements.
	5B. Operating Unit Participation: To what extent is the Enterprise Architecture process an effort representative of the whole organization? Level 0: No enterprise-wide effort. Level 1: Localized individual support of Enterprise Architecture process. Level 2: Limited organizational involvement. Level 3: Majority of organization is involved. Level 4: Cross-enterprise architecture involvement. Level 5: Entire organization uses feedback on the architecture process to improve its process.

Score	Level
	6A. Architecture Communication: To what extent are the decisions of Enterprise Architecture practice documented? Level 0: No documentation is available. Level 1: Little communication exists about the Enterprise Architecture process and possible process improvements. The DOC Enterprise Architecture Web Page contains the latest version of the Operating Unit's Enterprise Architecture documentation. Level 2: The Operating Unit Architecture Home Page, which can be accessed from the DOC Enterprise Architecture Web Page is updated periodically and is used to document architecture deliverables. Communication about architecture process via meetings, etc., may happen, but sporadic. Few tools (e.g., office suite, graphics packages) are used to document architecture. Level 3: Architecture documents updated and expanded regularly on DOC IT Architecture Web Page. Periodic presentations to IT staff on Architecture process, content. Tools are used to support maintaining architecture documentation. Level 4: Architecture documents are updated regularly, and frequently reviewed for latest architecture developments/standards. Regular presentations to IT staff on architecture content. Level 5: Architecture documents are used by every decision maker.
	6B. Architecture Communication: To what extent is the content of the Enterprise Architecture made available electronically to everybody in the organization? Level 0: No electronic means of communication. Level 1: Limited electronic means of communication. Level 2: Occasional updates published via e-mail. Level 3: More widespread electronic publication of Enterprise Architectures. Level 4: An online Web site is used to make available communications across the organization. Level 5: All Operating Units are actively involved through electronic updates.
	6C. Architecture Communication: To what extent is architecture education done across the business on the Enterprise Architecture process and contents? Level 0: No education. Level 1: Limited education. Level 2: Architecture education done for IT staff. Level 3: More widespread education done across various Operating Units. Level 4: Most Operating Units participate actively in Enterprise Architecture education. Ongoing education on the value of an Enterprise Architecture across Operating Units. Level 5: All Operating Units participate in staff education and understanding of IT Architecture. Various education/communication tools utilized across all Operating Units.
	7. IT Security: To what extent is IT Security integrated with the Enterprise Architecture? Level 0: No IT Security considerations in Enterprise Architecture. Level 1: IT Security considerations are ad hoc and localized. Level 2: IT Security Architecture has defined clear roles and responsibilities. Level 3: IT Security Architecture is fully developed and is integrated with IT Architecture. Level 4: Performance metrics associated with IT Security Architecture are captured. Level 5: Feedback from IT Security Architecture metrics are used to drive architecture process improvements.
	8. Governance: To what extent is an Enterprise Architecture governance (governing body) process in place and accepted by senior management? Level 0: None. Everyone does their own thing. Level 1: No explicit governance of architectural standards. Limited agreement with governance structure. Level 2: Governance of a few architectural standards (e. g. desktops, database management systems) and some adherence to existing Standards Profile. Various degrees of understanding of the proposed governance structure. Level 3: Explicit documented governance of majority IT investments. Formal processes for managing variances. Senior management team is supportive of enterprise-wide architecture standards and subsequent required compliance. Level 4: Explicit governance of all IT investments. Formal processes for managing variances feed back into Enterprise Architecture. Senior-management team takes ownership of enterprise-wide architecture standards and governance structure. Level 5: Explicit governance of all IT investments. A standards and waivers process is used to improve governance process improvements.
	9. IT Investment and Acquisition Strategy: To what extent does the Enterprise Architecture influence the IT Investment and Acquisition Strategy? Level 0: No regard for Enterprise Architecture in formulation of strategic IT Acquisition strategy by Operating Unit. Level 1: Little or no involvement of strategic planning and acquisition personnel in enterprise architecture process. Little or no adherence to existing Standards Profile. Level 2: Little or no formal governance of IT Investment and Acquisition Strategy. Operating Unit demonstrates some adherence to existing Standards Profile. Level 3: IT acquisition strategy exists and includes compliance measures to IT Enterprise Architecture. Operating Unit adheres to existing Standards Profile. RFQ, RFI and RFP content is influenced by the Enterprise Architecture. Acquisition personnel are actively involved in Enterprise Architecture governance structure. Cost-benefits are considered in identifying projects. Level 4: All planned IT acquisitions and acquisitions are guided and governed by the Enterprise Architecture. RFI and RFP evaluations are integrated into the IT Architecture planning activities. Level 5: Operating Unit has no unplanned IT investment or acquisition activity.

附件 2 – GAO Matrix

	Creating EA Awareness	Building the EA Management Foundation	Developing EA Products	Completing the EA Products	Leveraging the EA to Manage Change
Demonstrates Commitment		· Adequate resources exist. · Committee or group representing the enterprise is responsible for directing, overseeing, or approving EA.	· Written and approved organization policy exists for EA development.	· Written and approved organization policy exists for EA maintenance.	· Written and approved organization policy exists for IT investment compliance with EA.
Provides Capability to Meet Commitment		· Program office responsible for EA development and maintenance exists. Chief architect exists. · EA is being developed using a framework, methodology, and automated tool.	· EA products are under configuration management.	· EA products and management processes undergo independent verification and validation.	· Process exists to formally manage EA change. · EA is integral component of IT investment management process.
Demonstrates Satisfaction of Commitment		· EA plans call for describing both the "as-is" and the "to-be" environments of the enterprise, as well as a sequencing plan for transitioning from the "as-is" to the "to-be." · EA plans call for describing both the "as-is" and the "to-be" environments in terms of business, performance, information/data, application/service, and technology. · EA plans call for business, performance, information/data, service, and technology descriptions to address security.	· EA products describe or will describe both the "as-is" and the "to-be" environments of the enterprise, as well as a sequencing plan for transitioning from the "as-is" to the "to-be." · Both the "as-is" and the "to-be" environments are described or will be described in terms of business, performance, information/data, application/service, and technology. · Business, performance, information/data, application/service, and technology descriptions address or will address security.	· EA products describe both the "as-is" and the "to-be" environments of the enterprise, as well as a sequencing plan for transitioning from the "as-is" to the "to-be." · Both the "as-is" and the "to-be" environments are described in terms of business, performance, information/data, application/service, and technology. · Business, performance, information/data, application/service, and technology descriptions address security. · Organization CIO has approved current version of EA. · Committee or group representing the enterprise or the investment review board has approved current version of EA.	· EA products are periodically updated. IT investments comply with EA. · Organization head has approved current version of EA.
Verifies Satisfaction of Commitment		· EA plans call for developing metrics for measuring EA progress, quality, compliance, and return on investment.	· Progress against EA plans is measured and reported.	· Quality of EA products is measured and reported.	· Return on EA investment is measured and reported. · Compliance with EA is measured and reported.

附件 3 – E2AMM Matrix

	No Extended EA	Initial	Under Development	Defined	Managed	Optimized
Business &Technology Strategy Alignment	No awareness of aligning business strategies, business drivers & principles and IT strategies, drivers & principles.	Initial alignment of business strategies, business drivers & principles and IT strategies, drivers & principles.	First activities to align business strategies, drivers & principles and IT strategies, drivers & principles.	Formal alignment of business strategy, drivers, principles & functional / non- functional requirements and IT strategies, drivers, principles and functional / non-functional requirements.	Frequently reconsideration of business strategy, drivers, principles & functional / non-functional requirements and IT strategies, drivers, principles and functional / non-functional requirements.	Business –Technology cost / benefits validation metrics for end-to-end value chain examination. [E2-Grid]
Extended Enterprise Involvement	No involvement of Extended parties; No collaboration agreements.	Incidental involvement of Extended parties.	Awareness of collaboration with extended parties. First initiatives to involve extended parties in the E2A program	Extended parties involved in E2A program. Definition of collaboration levels and information exchange standards	Extended Enterprise management & governance structure in place.	Measurement structure in place to manage Extended Enterprise environment.
Executive-Management Involvement	E2A is not for us. We do not need to be involved. We know how to do our job. Don't tell me about.	I have heard something about E2A	Little awareness by management of Extended Enterprise Architecture possibilities. Spread skepticism to adopt Extended Enterprise Architecture.	Executive management aware of Extended Enterprise Architecture benefits. Executive management supports pro- active Extended Enterprise Architectural program.	Executive management evaluates periodic the Extended Enterprise Architecture program and results.	Executive management participating in the E2A optimization process.
Business Units Involvement	Extended Enterprise Architecture is not recognized by any business unit.	Some Business Units support the Extended Enterprise Architecture program and will deliver some added value to the Business – IT alignment process	Identification that it is hard to maintain too many different business processes and supporting technologies in n dynamic business world.	Identification that an Extended Enterprise Architecture program can reduce complexity and can enhance business flexibility. Adaptive Business – IT alignment is the answer to business dynamics.	Enterprise wide business units are actively involved in the Extended Enterprise Architecture program.	Extended Enterprise Architecture is established in all business units and part of their decision making process.
Extended Enterprise Architecture Program Office	E2A program does not exist.	First cut of E2A program in place. E2A architects identified.	E2A program being actively defined. E2A program office established.	E2A program established. E2A program office actively working together with business and IT units in defining E2A value.	Extended Enterprise Architecture program office is involved in the line of business and the Enterprise budget process.	Continuously measurement of E2A program activities and results. E2A measurement, process of the overall Enterprise improvement activities.
Extended Enterprise Architecture Developments	No Extended Enterprise Architecture recognition.	Some Extended Enterprise Architecture activities are started. Recognition about focusing on business value and IT standards + cost reduction activities. Ad hoc alignment of Business and IT.	Extended Enterprise Architecture program is set up. Business and IT strategy and standards are developed and linked. EA framework and methodology are chosen but not yet widely spread.	Extended Enterprise Architecture program established. Business & IT principles, drivers and strategies are defined and communicated. Extended Enterprise Architecture and Solution Architecture areas are defined and aligned.	Extended Enterprise Architecture program managed by E2A steering committee. Reference models are rolled out and accepted by business units. E2A program office involved in the definition of new projects. Extended Enterprise Architecture reflects current and future state.	Extended Enterprise Architecture program office manages projects portfolio landscape and aligns continuously the overall activities and initiatives.
Extended Enterprise Architecture Results	None.	E2A results are documented in a single way. No access to the results for others.	E2A results are shared with others. Most results are documented using traditional office tools. Access to the results is limited. Sharing of information in a traditional way. Modeling and visualization techniques are developed.	Extended Enterprise Architecture results are updated frequently. Standards, modeling methods and visualization techniques are used. E2A repository is set-up.	Extended Enterprise Architecture results are controlled and managed regularly. Business units are using the E2A results in their planning business. E2A results are accessible in an electronic way for all participants.	E2A results are mandatory used in the Enterprise wide strategic planning and governance activities. Continuous improvement of strategic planning and decision making cycle based on E2A results.
Strategic Governance	Strategic Governance in not in place.	Strategic Governance is in place and the first activities are set up to link the E2A program and Strategic Governance.	E2A results are part of the Strategic Governance process. The Enterprise Program management office and the Extended Enterprise Architecture office are working together on an incident base.	Strategic decision making and governance are based on the E2A results. The E2A program office is involved in the formal governance processes.	Formalized strategic governance of all business & IT investments based on E2A results.	Value measurement techniques are adopted to continuously measure the business and IT value of investments based on the E2A results and in line with the governance strategy.
Enterprise Program Management	Enterprise Program management not recognized.	Project management upgraded to program management. Recognition of the added value of Enterprise Program management. Program management executed almost in isolation.	Enterprise Program management and Extended Enterprise Architecture linked together. Enterprise Program management office responsible for the transformation part, Extended Enterprise Architecture office responsible for the Content part.	Enterprise Program management office and Extended Enterprise Architecture office, officially working together. Program management approach and E2A program aligned. Accountability en responsibility of activities defined.	Project and program initiatives under auspices of the Enterprise Program management office with participation of the Extended Enterprise Architecture office. Procedures, standards and methods are aligned.	Enterprise Program Management Office and Extended Enterprise Architecture Office are participating in the enterprise strategic planning process. Measurement techniques are in place to determine the added value to the business of all initiatives.
Holistic Extended Enterprise Architecture	Awareness of aligning business and technology not present.	Awareness of aligning business and technology present. First initiatives set up to align business and technology activities, based on the Enterprise its mission, vision strategies and business drivers.	Activities are set up to continuously align business and technology initiatives. Alignment of business and information modeling methods with the technology modeling methods.	Extended Enterprise Architecture framework is used to define the business IT alignment areas. Results of business and IT modeling methods are stored in a repository. Traceability of business and IT alignment.	Every project or program initiative is measured against the added value to the business and the cost of investments. The current and future state Extended Enterprise Architectures are used as a management tool to plan transformation initiatives. Business and Technology are operating on the same level of maturity.	The holistic E2A approach is part of the organizations culture. Business initiatives are continuously reflected to the technology impact and IT possibilities are driving new business activities.
Enterprise Budget & Procurement Strategy	Separated Business & IT budget & procurement strategy.	Almost no awareness about aligning and managing the Enterprise business & IT budget and procurement strategies.	First awareness about the alignment and management of the Enterprise business & IT budget and procurement processes.	The extended Enterprise Architecture office is participating in the enterprise budget and procurement strategy. Request for information or proposals are defined in co-operation with the enterprise architecture office.	The future state Extended Enterprise Architecture acts as a blueprint for investments, is formalized and part of the enterprise budget process.	All investment plans and initiatives are related to the Extended Enterprise Architecture results, the budgets and procurement strategy.

附件 4 – NASCIO Matrix

	No Program	Informal Program	Repeatable Program	Well-Defined Program	Managed Program	Continuously Improving Vital Program
Administration	· No Architecture Governance is in place	· The need for committees to define the standards and processes has been identified	· A need for Architecture Governance has been identified · EA Program has begun to develop clear roles and responsibilities · Governance committees are starting to form	· Architecture Governance committees are defined, and have defined roles and responsibilities · Authority of the governance committees is aligned to work together smoothly	· Governance roles and responsibilities are reviewed and updated to incorporate changes to the EA Framework	· Governance committees proactively review their activities and institute changes to improve their processes · The organization works with other states to share ideas for improvements to their EA Administration
Planning	· No plans for developing Enterprise Architecture are in place	· Need for Enterprise Architecture has been identified · EA activities are informal and unstructured	· The organization has begun to develop a vision for Enterprise Architecture · Organization has begun to identify EA tasks, and resource requirements. · Organization has decided on a methodology and begun to develop a plan for their EA Program	· EA Program plans are well-defined, including governance roles & responsibilities, a structured framework and timeline for developing the EA, and financial & staffing resource requirements · EA activities are carried out according to the defined plan	· EA plans are reviewed and changes are incorporated to improve the EA Program · The organization captures metrics to measure the progress against the established EA plans · Goals are being set for the future of the EA Program Plan	· Action plans are proactively implemented to increase the effectiveness of the EA Program based on captured metrics. · Organization works with other states to share ideas with focus on improvements to the planning process for the future EA Program
Framework	· Architecture processes and templates are not documented	· Processes are ad hoc and informal, processes followed may not be consistent · There is no unified architecture process across technologies and lines of business	· The basic EA Program is documented · Processes are planned and tracked · The organization is beginning to reuse methods for capturing critical EA information	· The lifecycle architecture processes have been defined and documented · Generic architecture processes are being customized for uses by agencies, departments, etc. · Process models have been prepared · Templates are used to ensure the capturing of information is consistent	· The organization captures metrics to measure the effectiveness of the EA processes and templates · Corrective action plans are put in place when deficiencies in templates and/or procedures are identified · Meetings are held regularly to review modifications to the EA Framework	· The lifecycle processes are being followed and have become second-nature to the organization · Captured metrics are used to identify inefficiencies in EA processes and templates prior to notification of issues · Organization works with other states to share ideas for improvements to EA processes and templates
Blueprint	· IT technology standards are not documented	· Documentation of business drivers, technology standards, etc. are informal and inconsistent	· Business Drivers, and strategic information have been identified · The need for an EA repository for storage and dissemination of the captured EA information has been identified	· Classification of existing technology standards is consistent · Documentation of business drivers, and strategic information is consistent	· Documentation of business drivers and strategic information has become a standard practice · Documentation and classification of products and compliances has become a standard practice · The organization captures metrics from the Compliance process to identify the need for updates to Blueprint information and/or classifications	· Captured business and technology information is reviewed in conjunction with the monitoring of new technology and business trends to proactively identify technology that will improve business · The organization works with other states to share information regarding business and technology trends
Communication	· Senior Management and agencies are not aware of what enterprise architecture is or the benefits	· The need to create greater awareness about EA has been identified · Little communication exists about the EA process or possible process improvements	· The need for Enterprise Architecture is being communicated to Senior Management · EA awareness activities are beginning to emerge or be developed	· The architecture is well defined and communicated · Training is provided for Senior management and agencies regarding architecture and its benefits · Training is provided for members of the EA committees	· A formal Communication process is in place and being followed · The communication process is reviewed and changes are incorporated to improve the communication of architecture activity and detail. · EA awareness training is incorporated into new employee orientation · The organization captures metrics to measure the effectiveness of the EA Communication process	· Metrics are used to proactively identify opportunities for improved communication avenues · The organization works with other states to share ideas for improvements to the communications processes
Compliance	· No compliance process exists within the organization	· The need for compliance to standards has been identified · Compliance is informal and unstructured · Compliance cannot be measured effectively, because processes and procedures are not consistent across areas and/or projects	· The organization has begun to develop a compliance process to ensure that projects and enhancements are consistent with EA standards	· A formal EA compliance process is well-defined and is an integral part of the EA lifecycle processes · The EA Compliance process is followed consistently throughout the enterprise · A Business Case is required for variance from the EA standards	· Compliance to the EA standards has become common practice throughout the enterprise · Quality metrics associated with the business cases are captured · The compliance process is reviewed and updated when deficiencies or enhancements to the process are identified	· Information gathered during the compliance process is used to proactively identify updates to the EA standards and/or framework · Architecture metrics are used to drive continuous process improvements in the Business Cases · The organization works with other states to share ideas for improvements to the compliance process
Integration	· No program in place for integration across the enterprise	· The need to document common functions that integrate with an EA Program has been identified · Projects and purchases are typically done in isolation, resulting in costly purchases and redundant development and training requirements	· The need for integration to the EA Program Framework (Architecture Lifecycle Processes) has been identified · The various touch-points between the Management Processes and the EA Program Framework have been mapped (however, no details exist as to how the integration will work)	· EA Program is integrated with strategic planning and budgeting processes · Touch-points of management processes to the EA are well-defined	· Enterprise Architecture is used to guide development and acquisition · The organization captures metrics to measure the savings in resources, including time and money · Costs and benefits, including benefits across agency boundaries, are considered in identifying projects · Integration procedures are reviewed and the process is updated when problems or new functionality is identified	· The Enterprise Architecture process drives continual reinvention throughout the enterprise · Business influences Technology and Technology influences Business · Captured metrics are used to proactively identify improvements to the EA framework or blueprint information and/or integration processes. · Organization works with other states to share ideas for improved integration, including procurement and project management practices
Involvement	· There is no program in place for Enterprise Architecture awareness · Several independent groups or individuals typically work to solve a single issue	· The organization has identified a need to make staff throughout the enterprise aware of the benefits · EA awareness efforts are informal and inconsistent · Some groups are unsupportive of the efforts and may cause unrest in the organization	· The organization has begun to develop plans for EA educational sessions and materials to increase the · awareness and understanding of the EA concepts and processes · EA concepts are beginning to be introduced and more consistently discussed in normal day-to-day meetings	· The organization begins to operate as a team, using the defined architecture program and standards · Senior Management participate in various EA committees · Business and technical staff participate in EA committees	· Personnel throughout the organization have a good understanding of the architecture principals and participate in the EA processes as members of committees or as their projects, etc. have touch points with the architecture · The organization captures metrics to measure the awareness, participation, acceptance and satisfaction with the EA Program	· Agencies and departments work together as contributors to the architecture and its processes · The organization uses the captured metrics to proactively create action plans for improvement in the EA marketing and educational programs · The organization works with other states to share ideas for creating an atmosphere for active involvement and participation in EA Program and activities across the enterprise

附件 5 – OSIMM Matrix

	Silo	Integrated	Componentized	Services	Composite Services	Virtualized Services	Dynamically Re-Configurable Services
Business	Isolated Business Line Driven	Business Process Integration	Componentized Business Functions	Business provides & consumes services	Composed Business Services	Outsourced Services BPM & BAM	Business capabilities via context aware services
Organization & Governance	Ad hoc LOB IT Strategy and Governance	IT Transformation	Common Governance Processes	Emerging SOA governance	SOA and IT Governance Alignment	SOA and IT Infrastructure Governance	Governance via Policy
Method	Structured Analysis & Design	Object Oriented Modeling	Component Based Development	Service Oriented Modeling	Service Oriented Modeling	Service Oriented Modeling for Infrastructure	InfrastructureBusiness Process Modeling
Application	Modules	Objects	Components	Services	Applications comprised of composite services	Process Integration via Service	Dynamic Application Assembly
Architecture	Monolithic Architecture	Layered Architecture	Component Architecture	Emerging SOA	SOA	Grid Enabled SOA	Dynamically Re-Configurable Architecture
Information	Application Specific Data Solution	LOB Specific (Data subject areas established)	Canonical Models	Information as a Service	Enterprise Business Data Dictionary & Repository	Virtualized Data Services	Semantic Data Vocabularies
Infrastructure & Management	LOB Platform Specific	Enterprise Standards	Common Reusable Infrastructure	Project Based SOA Environment	Common SOA Environment	Virtual SOA Environment: Sense & Respond	Context-aware Event-based: Sense & Respond

附件 6 – ACMM Matrix

Phase Description	Initial Informal EA Process Underway.	Under Development EA process is under development.	Defined Defined EA Including Detailed Written Procedures and Technical Reference Model	Managed Managed and Measured EA Process.	Optimizing Continuous Improvement of EA Process
Architecture Process	Processes are ad hoc and localized. Some EA processes are defined. There is no unified architecture process across technologies or business processes. Success depends on individual efforts.	Basic EA Process program is documented based on OMB Circular A - 130 and Department of Commerce EA Guidance. The architecture process has developed clear roles and responsibilities.	The architecture is well defined and communicated to IT staff and business management with Operating Unit IT responsibilities. The process is largely followed.	EA process is part of the culture. Quality metrics associated with the architecture process are captured.	Concerted efforts to optimize and continuously improve architecture process.
Architecture Development	EA processes, documentation, and standards are established by a variety of ad hoc means and are localized or informal.	IT Vision, Principles, Business Linkages, Baseline, and Target Architecture are identified. Architecture standards exist, but not necessarily linked to Target Architecture. Technical Reference Model and Standards Profile framework established.	Gap Analysis and Migration Plan are completed. Fully developed Technical Reference Model and Standards Profile.IT goals and methods are identified. The architecture aligns with the DOC and Federal EAs.	EA documentation is updated on a regular cycle to reflect the updated EA. Business, Information, Application and Technical Architectures defined by appropriate de-jure and de-facto standards. The architecture continues alignment with the DOC and Federal EAs.	A standards and waivers process are used to improve architecture development process improvements.
Business Linkage	Minimal, or implicit linkage to business strategies or business drivers.	Explicit linkage to business strategies.	EA is integrated with capital planning & investment control and supports e-government.	Capital planning and investment control are adjusted based on the feedback received and lessons learned from updated EA. Periodic re-examination of business drivers.	Architecture process metrics are used to optimize and drive business linkages. Business involved in the continuous process improvements of EA.
Senior Management Involvement	Limited management team awareness or involvement in the architecture process.	Management awareness of Architecture effort.	Senior-management team aware of and supportive of the enterprise-wide architecture process. Management actively supports architectural standards.	Senior-management team directly involved in the architecture review process.	Senior management involvement in optimizing process improvements in Architecture development and governance.
Operating Unit Participation	Limited Operating Unit acceptance of the EA process.	Responsibilities are assigned and work is underway.	Most elements of Operating Unit show acceptance of or are actively participating in the EA process.	The entire Operating Unit accepts and actively participates in the EA process.	Feedback on architecture process from all Operating Unit elements is used to drive architecture process improvements.
Architecture Communication	The latest version of the Operating Unit's EA documentation is on the Web. Little communication exists about the EA process and possible process improvements	The DOC and Operating Unit EA Web Pages are updated periodically and is used to document architecture deliverables.	Architecture documents updated regularly on DOC EA Web Page.	Architecture documents are updated regularly, and frequently reviewed for latest architecture developments/standards.	Architecture documents are used by every decision maker in the organization for every IT-related business decision.
IT Security	IT Security considerations are ad hoc and localized.	IT Security Architecture has defined clear roles and responsibilities.	IT Security Architecture Standards Profile is fully developed and is integrated with EA.	Performance metrics associated with IT Security Architecture are captured.	Feedback from IT Security Architecture metrics are used to drive architecture process improvements.
Governance	No explicit governance of architectural standards.	Governance of a few architectural standards and some adherence to existing Standards Profile.	Explicit documented governance of majority IT investments.	Explicit governance of all IT investments. Formal processes for managing variances feed back into EA.	Explicit governance of all IT investments. A standards and waivers process is used to improve governance-process improvements.
IT Investment and Acquisition Strategy	Little or no involvement of strategic planning and acquisition personnel in EA process. Little or no adherence to existing Standards Profile	Little or no formal governance of IT Investment and Acquisition Strategy. Operating Unit demonstrates some adherence to existing Standards Profile.	IT acquisition strategy exists and includes compliance measures to IT EA. Cost-benefits are considered in identifying projects.	All planned IT acquisitions and purchases are guided and governed by the EA.	No unplanned IT investment or acquisition activity.