

Avancier Methods (AM)

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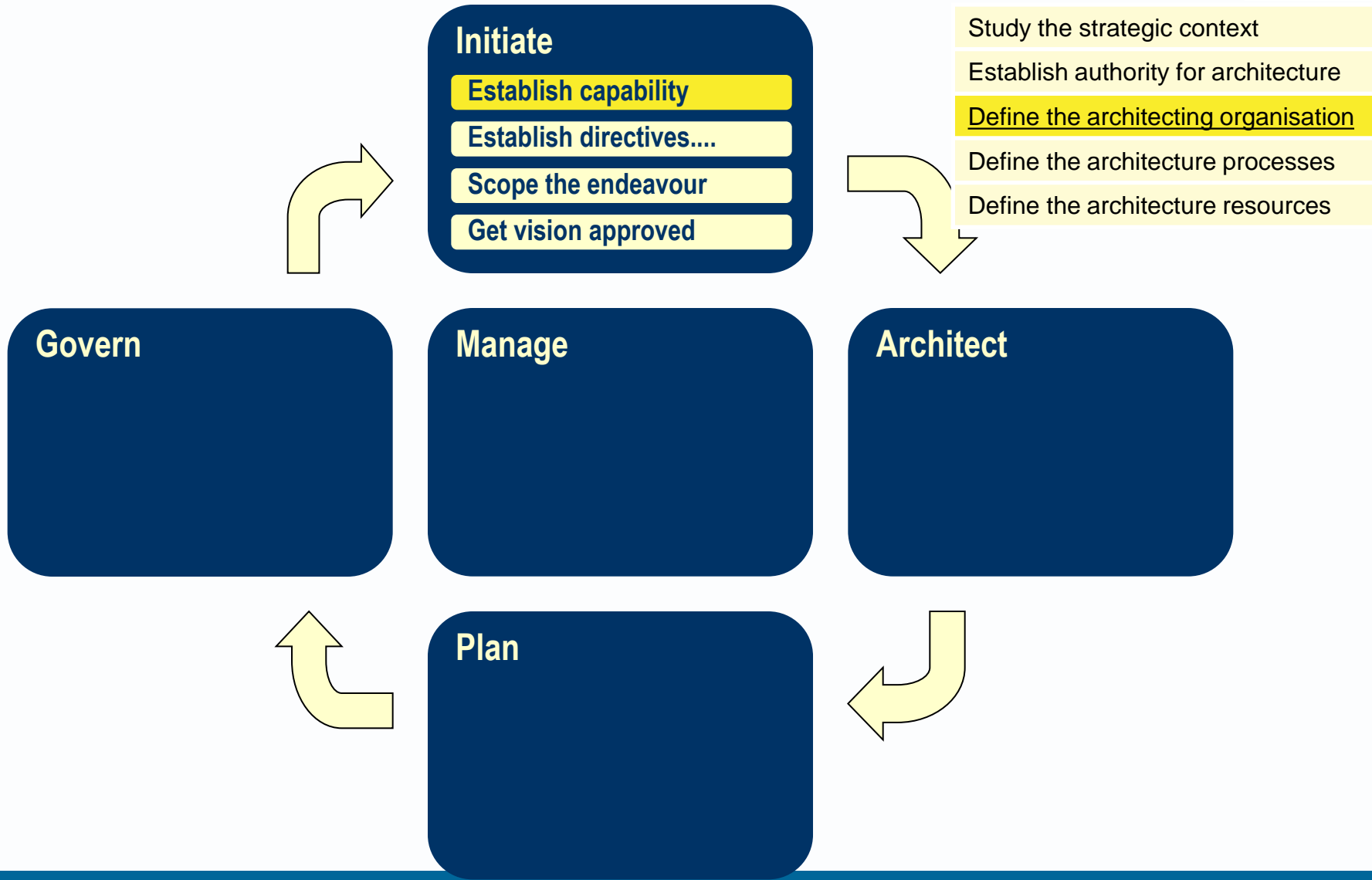
Assess architecture maturity

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Assess architecture maturity

- ▶ An introduction to maturity models in general and architecture maturity in particular

Where in the AM solution architecture process?



Capability maturity model

- ▶ A way to assess the maturity of an organisation by
- ▶ measuring each of its core processes or characteristics
- ▶ on a 5-point scale of maturity

Capability levels

- 5 Optimizing: Focus on process improvement
- 4 Managed: Process measured and controlled
- 3 Defined: Standard process published and understood.
- 2 Repeatable: Can repeat previously mastered tasks
- 1 Initial: Ad hoc, unpredictable and risky
- 0 Missing: Does not exist or irrelevant

Processes

Project responsibilities

- ▶ Requirements Management
- ▶ Software Project Planning
- ▶ Software Project Tracking and Oversight
- ▶ Software Subcontractor Management
- ▶ Software Configuration Management
- ▶ Integrated Software Management
- ▶ Software Product Engineering
- ▶ Intergroup Coordination
- ▶ Peer Reviews
- ▶ Quantitative Process Management
- ▶ Software Quality Management
- ▶ Defect Prevention

Capability levels

- 5 Optimizing
- 4 Managed
- 3 Defined
- 2 Repeatable
- 1 Initial
- 0 Missing

Processes

Enterprise responsibilities

- ▶ Software Quality Assurance
- ▶ Organization Process Focus
- ▶ Organization Process Definition
- ▶ Training Program
- ▶ Technology Change Management
- ▶ Process Change Management

And then...

- ▶ CMU SEI's original CMM for software development organisations proved so successful that many other maturity models have been built to the same pattern.
- ▶ There are now several “architecture maturity models” including the simple one included here.

US Dept of Commerce: ACMM for an architecture organisation

9 architecture characteristics:

- ▶ 1. IT architecture process
- ▶ 2. IT architecture development
- ▶ 3. Business linkage
- ▶ 4. Senior management involvement
- ▶ 5. Operating unit participation
- ▶ 6. Architecture communication
- ▶ 7. IT security
- ▶ 8. Architecture Governance
- ▶ 9. IT investment and acquisition strategy

6 maturity levels

- ▶ 1. None
- ▶ 2. Initial
- ▶ 3. Under development
- ▶ 4. Defined
- ▶ 5. Managed
- ▶ 6. Measured

2 kinds of maturity rating.

- ▶ a weighted mean IT architecture maturity level.
- ▶ the percentage achieved at each maturity level for the nine architecture characteristics.

ACMM first three elements

	Architecture Process	Architecture Development	Business Linkage
5	Concerted efforts to optimize and continuously improve architecture process.	A standards and waivers process is used to improve the architecture development process.	Architecture process metrics are used to optimize and drive business linkages. Business involved in the continuous process improvements of EA.
4	EA process is part of the culture. Quality metrics associated with the architecture process are captured.	EA documentation is updated on a regular cycle to reflect the updated EA. Business, Data, Application and Technology Architectures defined by appropriate de-jure and de-facto standards.	Capital planning and investment control are adjusted based on the feedback received and lessons learned from updated EA. Periodic re-examination of business drivers.
3	The architecture is well defined and communicated to IT staff and business management with Operating Unit IT responsibilities. The process is largely followed.	Gap Analysis and Migration Plan are completed. Fully developed Technical Reference Model and Standards Profile. IT goals and methods are identified.	EA is integrated with capital planning and investment control.
2	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.	IT Vision, Principles, Business Linkages, Baseline, and Target Architecture are identified. Architecture standards exist, but not necessarily linked to Target Architecture. TRM and Standards established.	Explicit linkage to business strategies.
1	Processes are ad hoc and localized. Some EA processes are defined. No unified architecture process across technologies or business processes. Success depends on individual efforts.	EA processes, documentation and standards are established by a variety of ad hoc means and are localized or informal.	Minimal, or implicit linkage to business strategies or business drivers.
	Architecture Process	Architecture Development	Business Linkage

ACMM middle three elements



	Senior Management Involvement	Operating Unit Participation	Architecture Communication
5	Senior management involvement in optimizing process improvements in Architecture development and governance.	Feedback on architecture process from all Operating Unit elements is used to drive architecture process improvements.	Architecture documents are used by every decision maker in the organization for every IT-related business decision.
4	Senior-management team directly involved in the architecture review process.	The entire Operating Unit accepts and actively participates in the IT Architecture process.	Architecture documents are updated regularly, and frequently reviewed for latest architecture developments/standards.
3	Senior-management team aware of and supportive of the enterprise-wide architecture process. Management actively supports architectural standards.	Most elements of Operating Unit show acceptance of or are actively participating in the EA process.	Architecture documents updated regularly on DoC EA Web Page.
2	Management awareness of Architecture effort.	Responsibilities are assigned and work is underway.	The DoC and Operating Unit EA Web Pages are updated periodically and are used to document architecture deliverables.
1	Limited management team awareness or involvement in the architecture process.	Limited Operating Unit acceptance of the EA process.	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.
	Senior Management Involvement	Operating Unit Participation	Architecture Communication

ACMM last three elements



	IT Security	Architecture Governance	IT Investment and Acquisition Strategy
5	Feedback from IT Security Architecture metrics are used to drive architecture process improvements.	Explicit governance of all IT investments. A standards and waivers process is used to improve governance-process improvements.	No unplanned IT investment or acquisition activity.
4	Performance metrics associated with IT Security Architecture are captured.	Explicit governance of all IT investments. Formal processes for managing variances feed back into EA.	All planned IT acquisitions and purchases are guided and governed by the EA.
3	IT Security Architecture Standards Profile is fully developed and is integrated with EA.	Explicit documented governance of majority of IT investments.	IT acquisition strategy exists and includes compliance measures to IT EA. Cost-benefits are considered in identifying projects.
2	IT Security Architecture has defined clear roles and responsibilities.	Governance of a few architectural standards and some 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.
1	IT Security considerations are ad hoc and localized.	No explicit governance of architectural standards.	Little or no involvement of strategic planning and acquisition personnel in the EA process. Little or no adherence to existing Standards.
	IT Security	Architecture Governance	IT Investment and Acquisition Strategy

And then...

- ▶ Architects now create and use maturity models to assess the maturity of an enterprise – including its readiness to accept proposed changes

Avancier Methods (AM) Initiate

Avancier Methods Maturity Model

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Avancier Methods (AM) Maturity Model



- ▶ A way to assess the maturity of an organisation
- ▶ in enterprise and solution architecture by
- ▶ measuring the adoption of Avancier Methods
- ▶ on a 5-point scale of maturity

1 Initial: pre-AM

- ▶ Hero level. Ad hoc organisations, processes and documentation. Unpredictable and risky.
- ▶ There are people called architect and/or doing architecture work, but you know little of what they are doing or how they do it.
- ▶ Some architects may have attended training in AM, but there is no management or group decision to use AM

2 Repeatable: AM is recognised and repeatable

- ▶ There is an organisation structure in which architect roles are recognised. The group's default standard is to use AM processes and documents.

- ▶ Architects have been trained to certification level in AM's Processes for
 - Enterprise architecture
 - Solution architecture

- ▶ Architects have been trained to certification level in AM's Documentation
 - Catalogues
 - Matrices
 - Diagrams

3 Defined: AM is used

- ▶ There is a pool of solution architects
 - ▶ Architects can show where they have used AM processes
 - ▶ There are Peer Reviews of process use

 - ▶ Architects can show where they have used AM documentation
 - ▶ There are Peer Reviews of documentation
- AND / OR
- ▶ There is an enterprise architect team
 - ▶ There is EA collateral:
 - Business function hierarchy,
 - Business data model
 - Business function/data matrix
 - Application portfolio
 - Infrastructure technology portfolio
 - Principles
 - Standards
 - Reference data models
 - Reference process models
 - Service catalogue
 - ▶ The EA collateral is used

4 Managed: AM use is managed

- ▶ The architecture board is formally related to
 - The IT Steering Committee
 - The Change Advisory Board

- ▶ AM processes are linked to management processes
 - Programme/Project Management
 - Risk Management
 - Supplier Management
 - Change Management

- ▶ The architecture repository records
 - All projects steered by architects
 - All compliance review reports
 - Use of AM processes and documents on those projects
 - Measures of satisfaction with the AM processes and documents.

5 Optimizing: AM use is improved

- ▶ The organisation and roles that use AM are measured and monitored.
- ▶ The use of AM processes is measured and monitored.
- ▶ The use of AM documentation is measured and monitored.
- ▶ Change requests are agreed and made.

Where in the AM solution architecture process?

