

Avancier Methods (AM)

Processes and Techniques

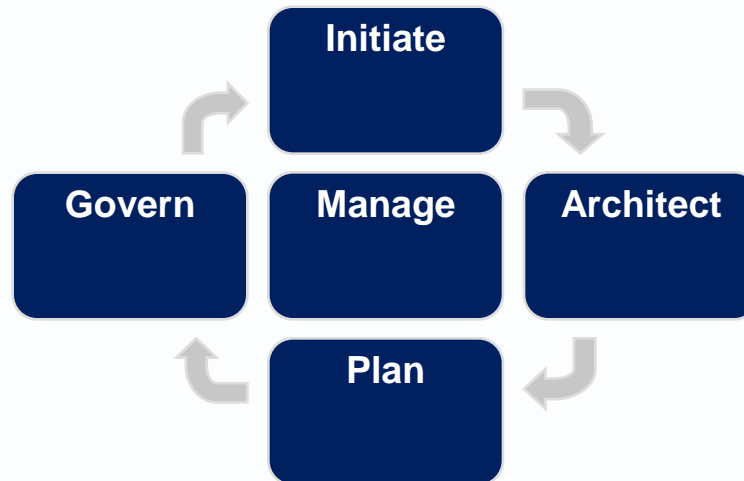
(top level overview)

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What is an architecture framework?

It provides structures and guidance on

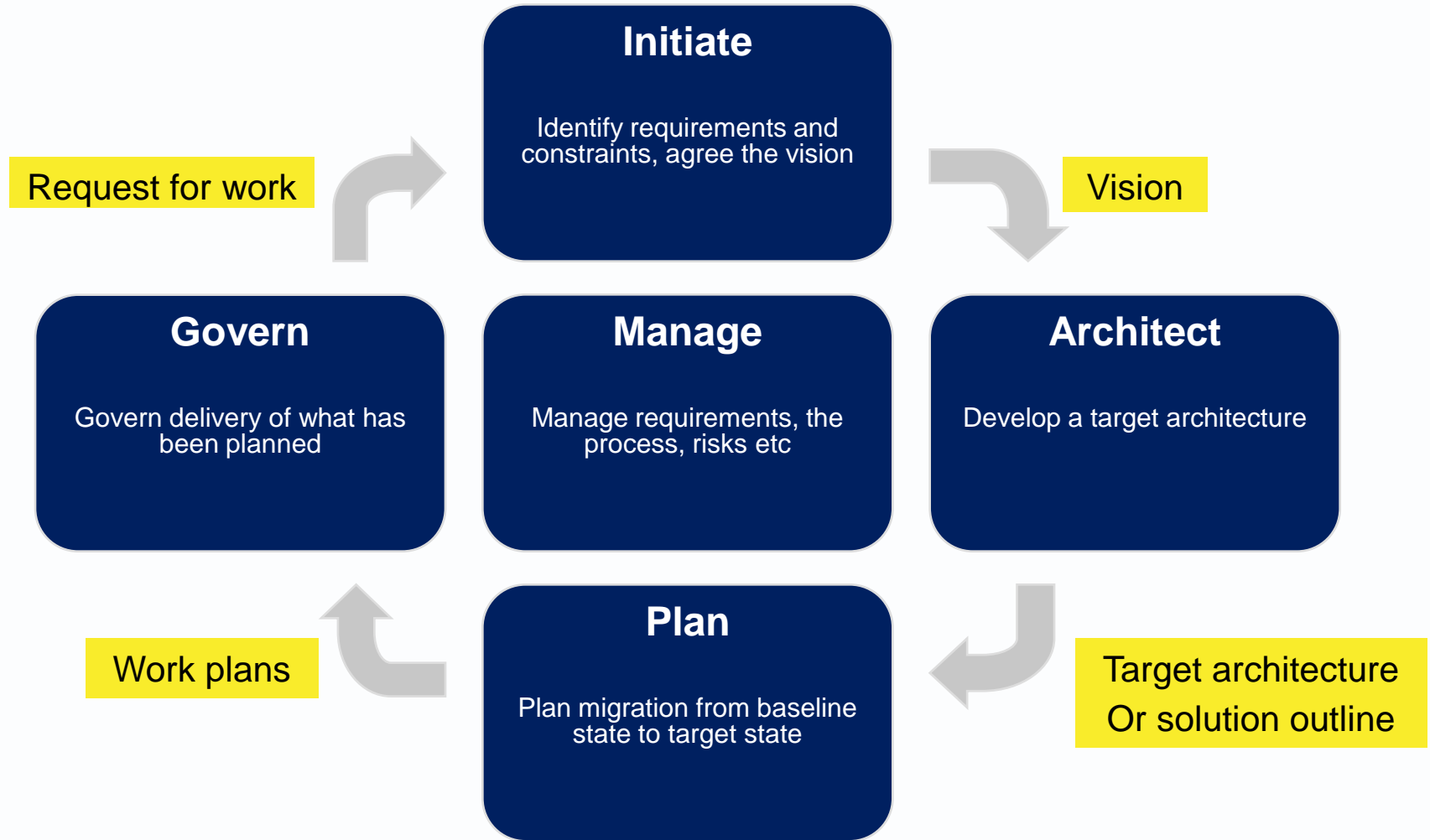
- ▶ Process: an architecture development process (this presentation)
- ▶ Products: a documentation framework
- ▶ People: advice on architect roles and organisation.



Who uses an architecture framework?

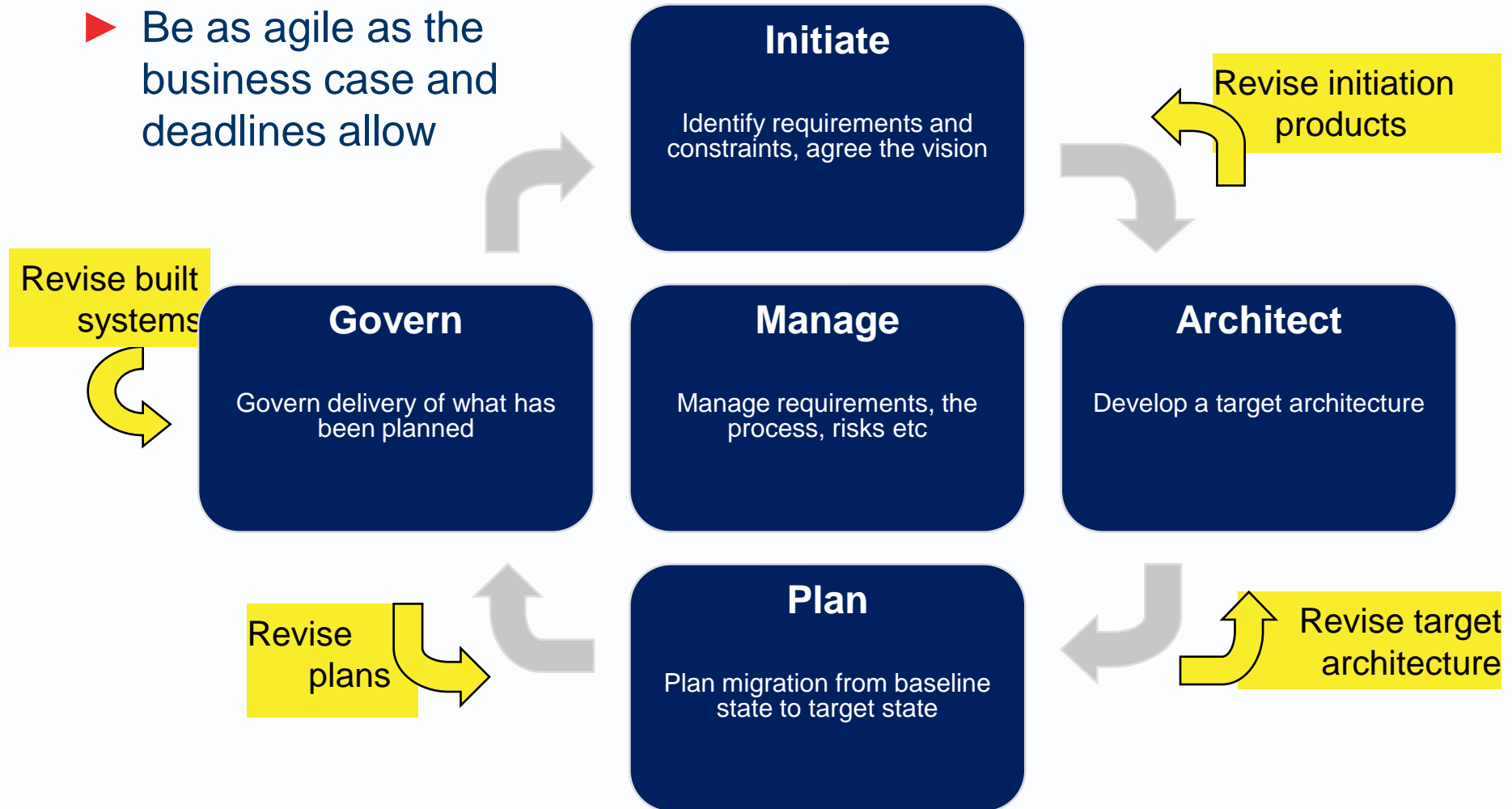
- ▶ AM can be used by architects and analysts working on change projects.
- ▶ But is designed primarily for architects working in some kind of overarching “strategy and architecture” team.

AM follows this general problem solving pattern



Iterate where necessary to correct or improve

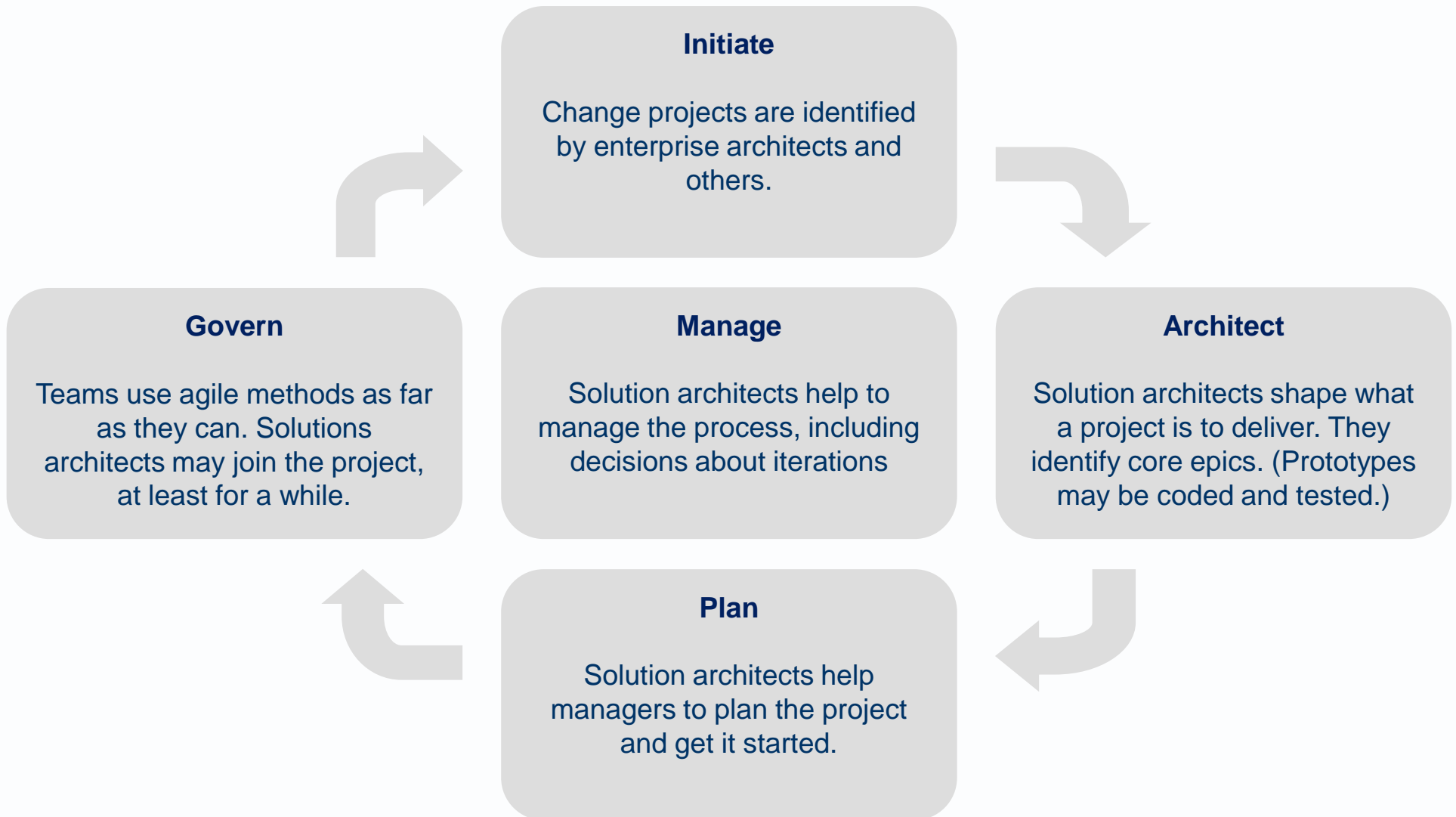
▶ Be as agile as the business case and deadlines allow

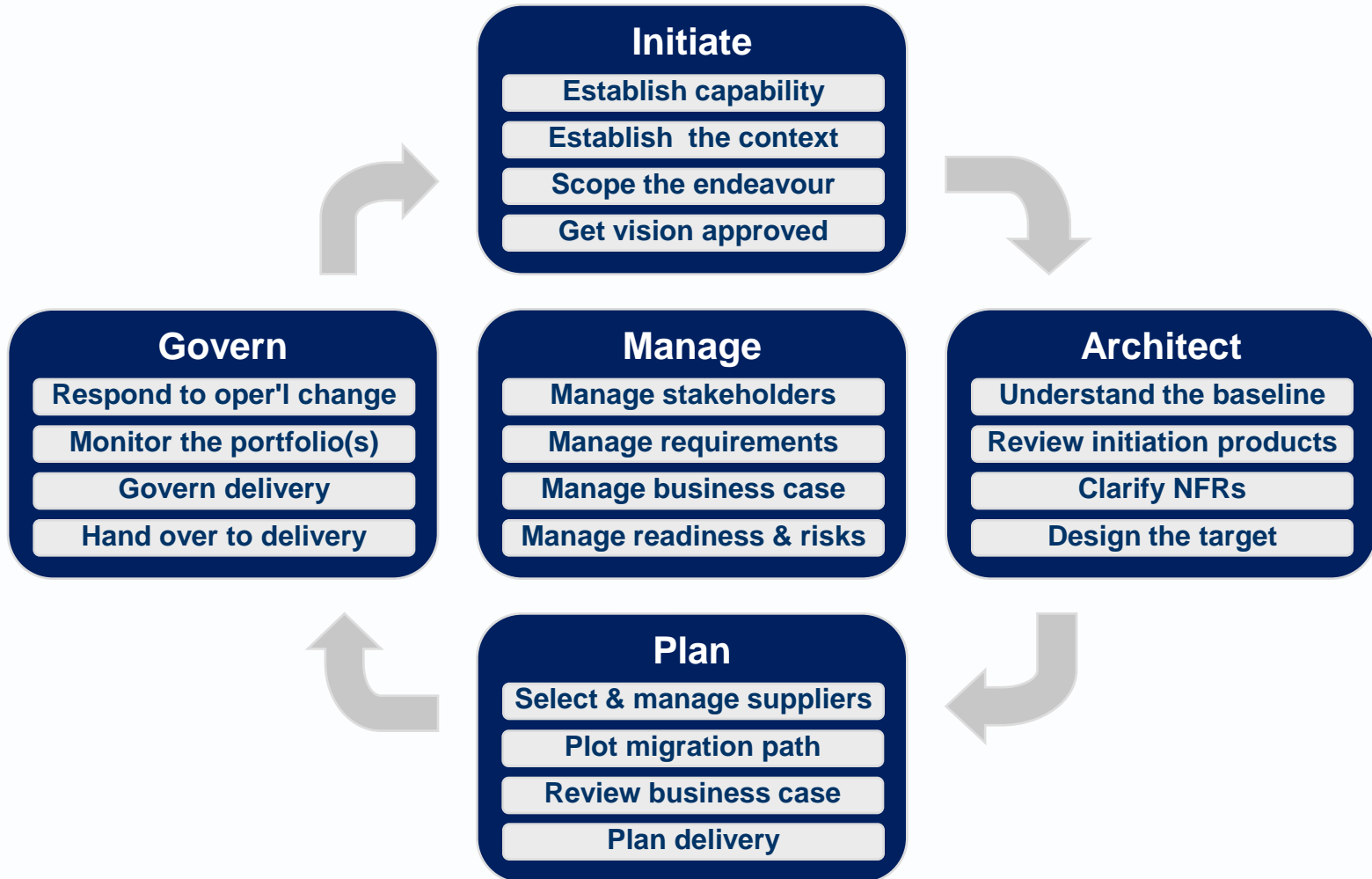


- ▶ Software projects are expected to use agile development methods
- ▶ Such SCRUM and Kanban

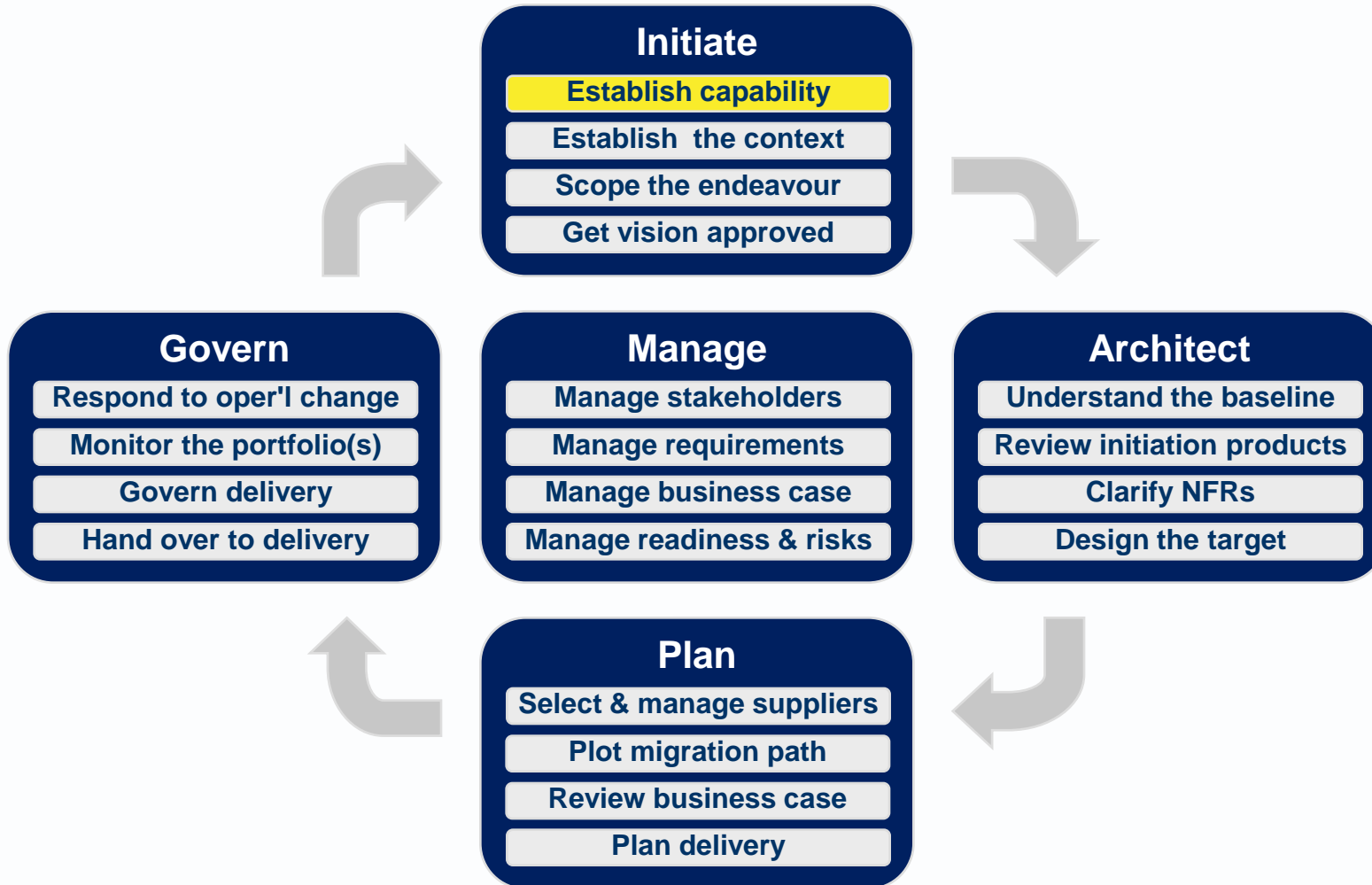
- ▶ *Architects* typically
 - help to identify epics (aka use cases)
 - identify their non-functional characteristics
 - consider implications of those on the high level design

- ▶ *Other team members.*
 - detail “epics” to the “user story” level
 - with a focus on the User Experience





AM level 2 process: Establish capability

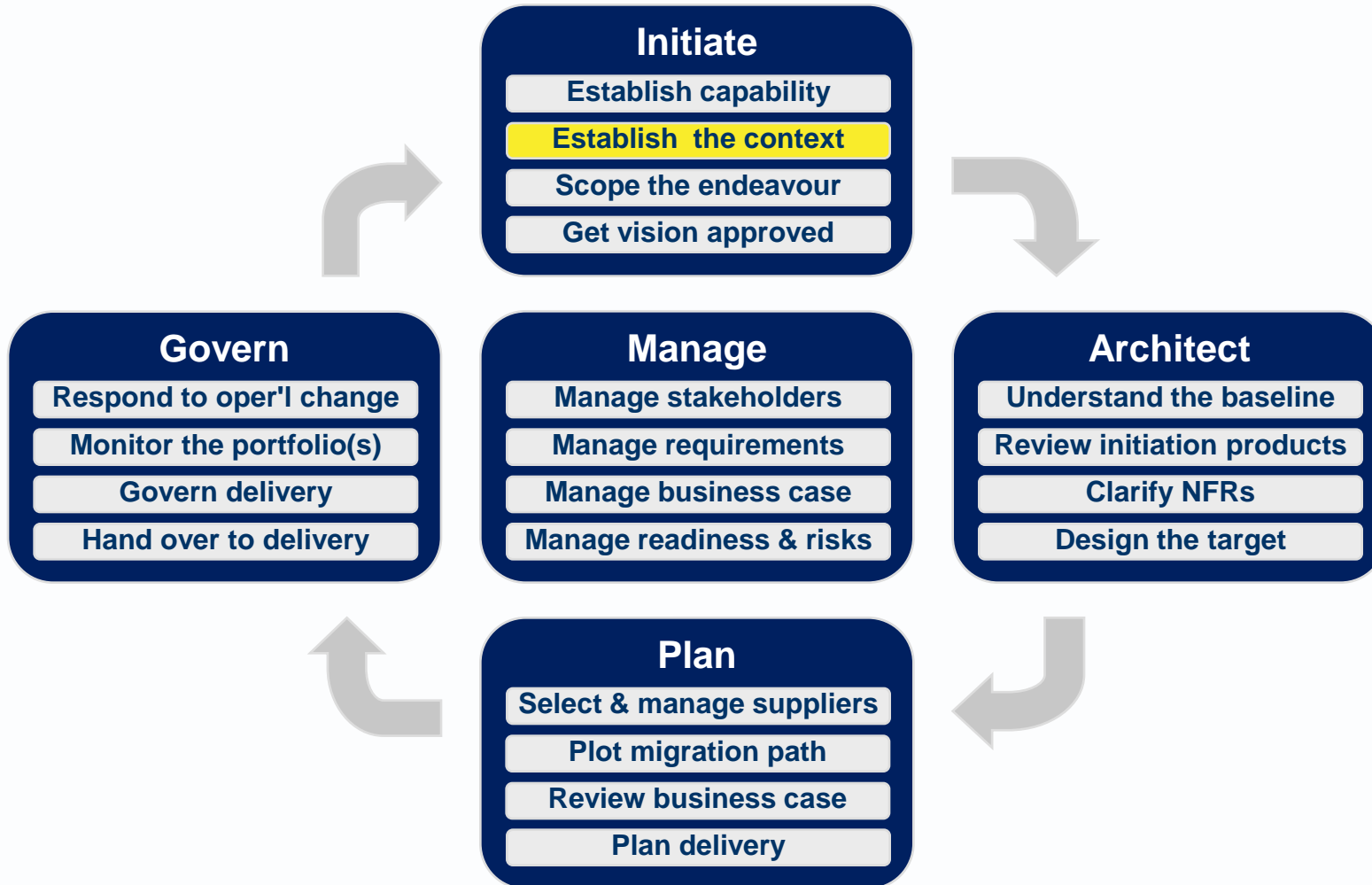


Establish capability

1. Establish authority for architecture
2. Define the architecting organisation
3. Define the architecture processes
4. Define the architecture resources

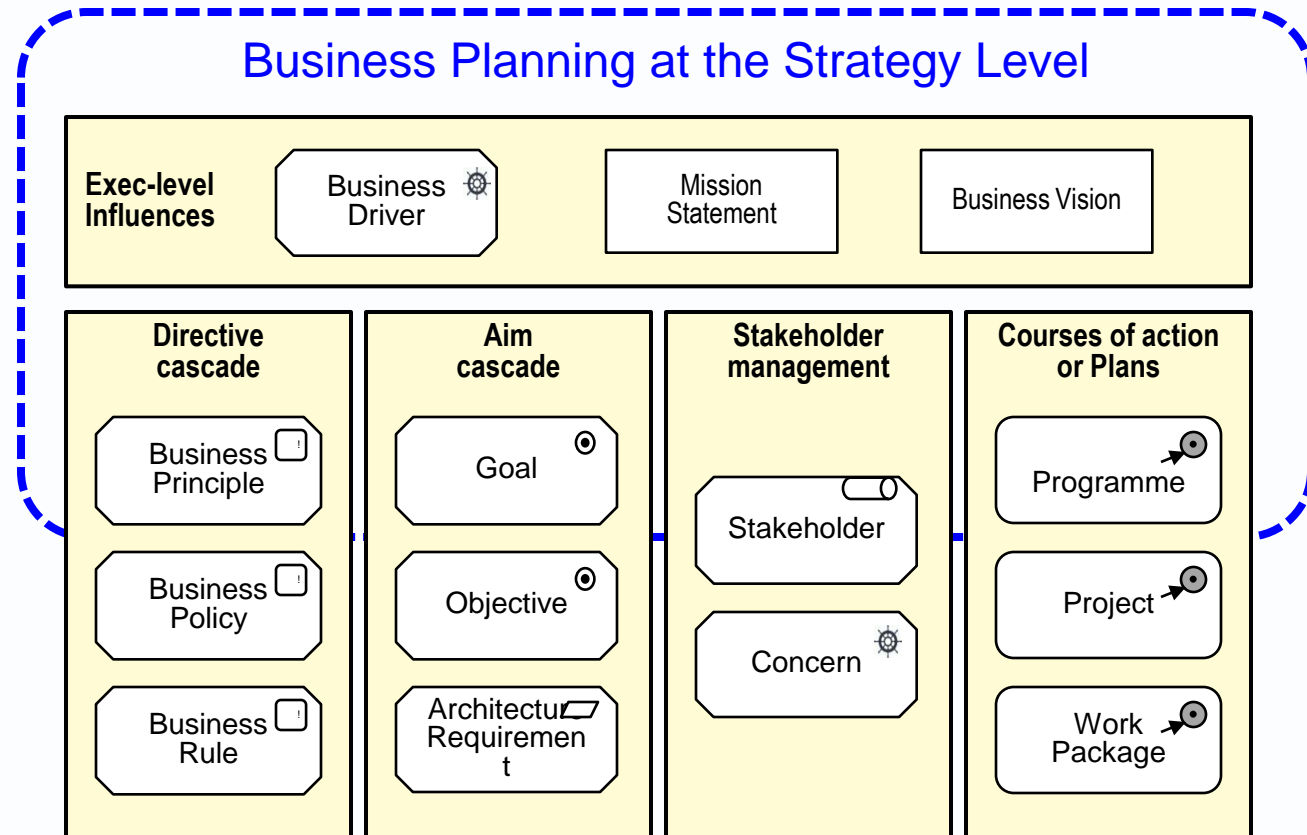
Relevant to the “enterprise” or specific “architecture project”

AM level 2 process: Establish the context



Establish the context

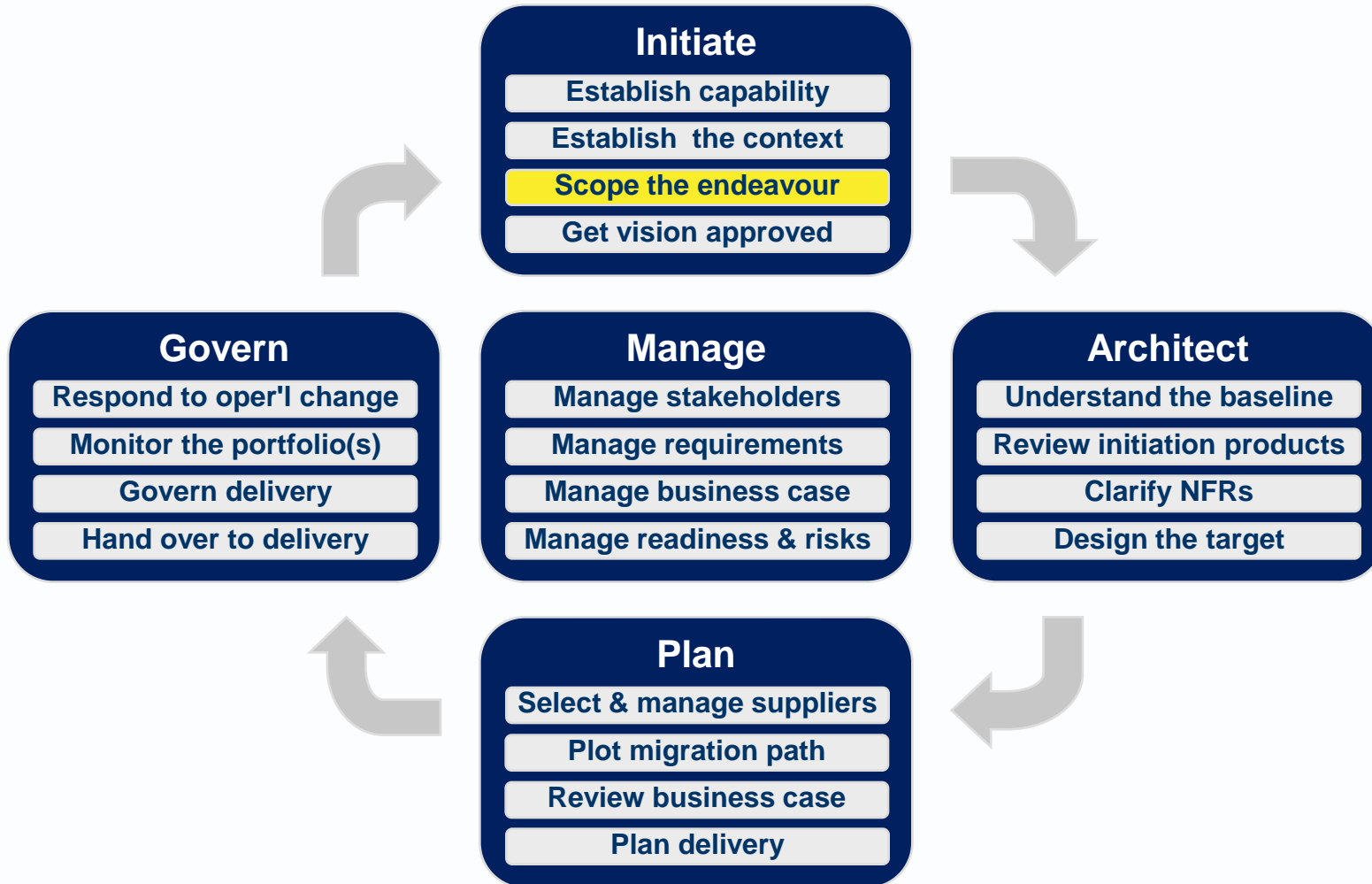
1. Study the strategic context
2. Establish strategic directives and goals



Lower level process: Study the strategic context

1. Look for forces that drive strategic thinking
 - Look for drivers
 - Look for directives and aims
2. Look for what strategies exist
3. Look for the business strategy
4. Look for the desired “operating model”
5. Look at IT strategy in the broad
 - Look for the information strategy
 - Look for the applications strategy
 - Look for the data quality strategy
 - Look for the technical infrastructure strategy

AM level 2 process: Scope the Endeavour



Scope the Endeavour

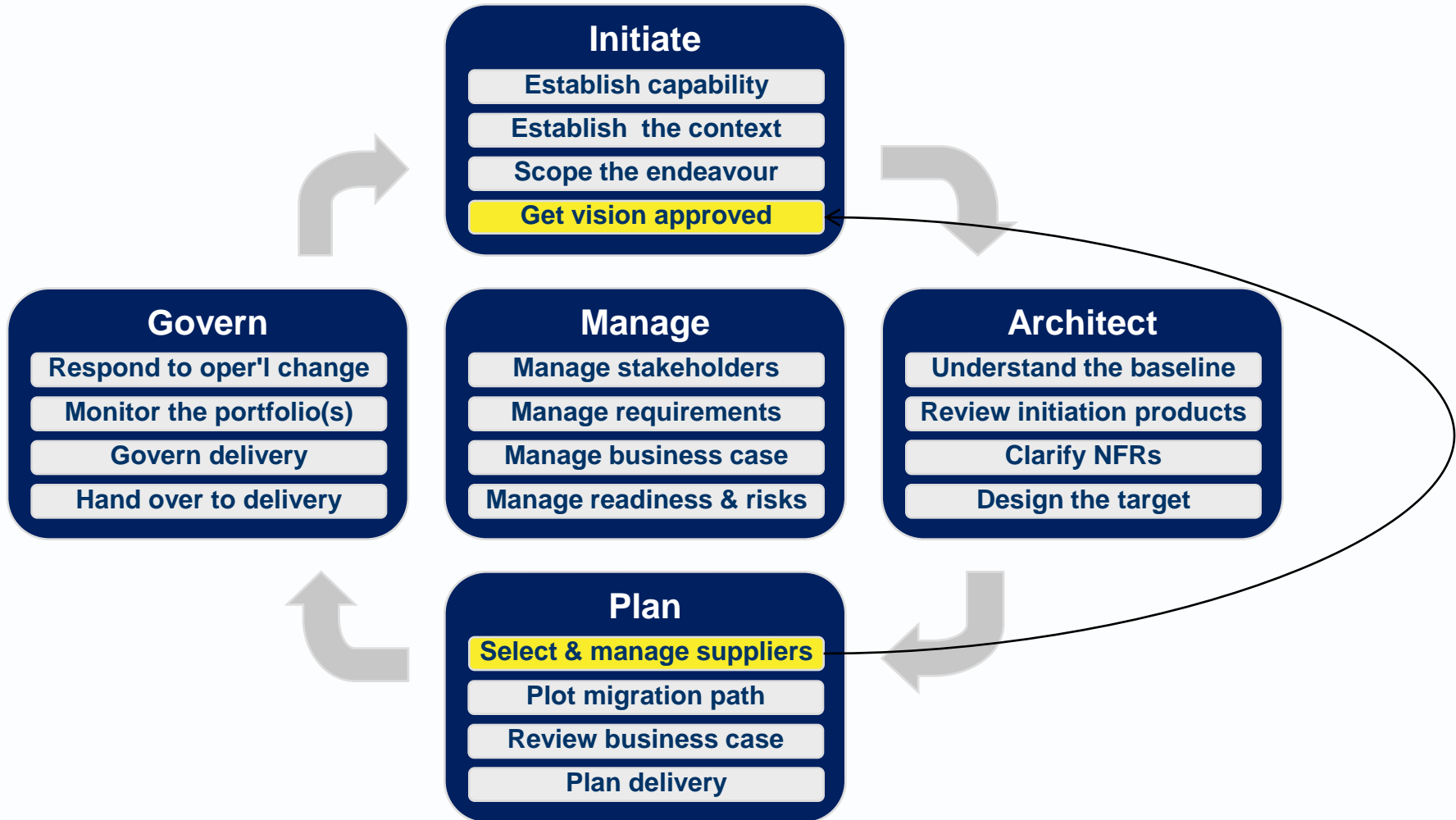
1. Identify stakeholders
2. Identify aims
3. Identify constraints
4. Agree a solution vision
5. Scope in several ways
6. Plan the “architecture project”

Scope the Endeavour

► Define three dimensions

Breadth	Constraints	Depth
Size & complexity of System/project Large / Medium / Small	Time/resources to describe the system/project Little / Moderate / Lots	Level of detail reachable in descriptions/plans
Large	Little	Vacuous
Medium	Little	Sketchy
Large	Moderate	Sketchy
Medium	Moderate	Elaborate
Small	Little	Elaborate
Large	Lots	Elaborate
Small	Moderate	Fulsome
Medium	Lots	Fulsome
Small	Lots	Complete

AM level 2 process: Get vision approved

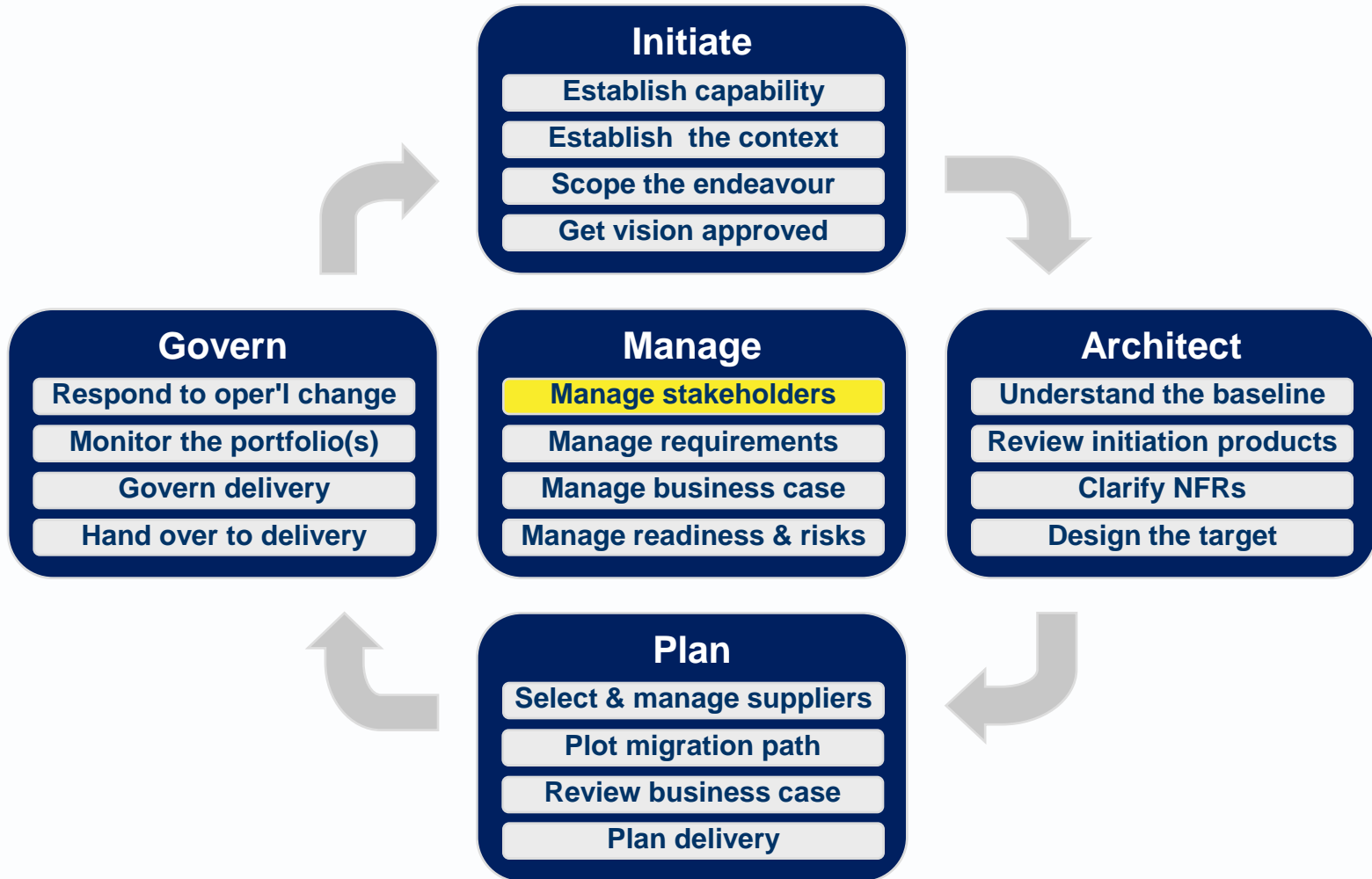


Get vision approved



1. Clarify or build the initial business case
2. Document and present solution vision(s)
3. Get sponsor and other stakeholder approval for further work

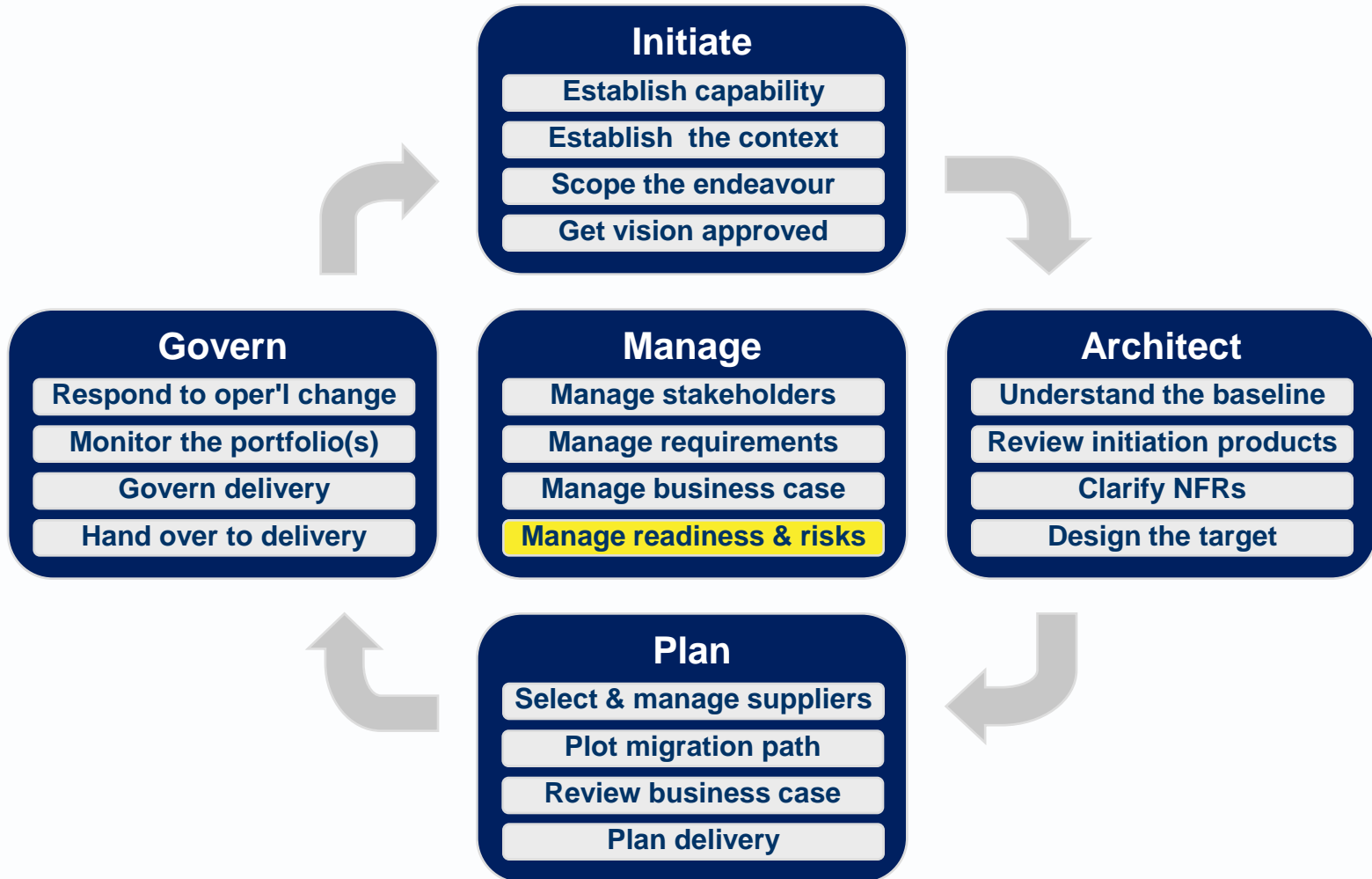
AM level 2 process: Manage Stakeholders



Manage stakeholders

1. Identify Your Stakeholders
2. Prioritize Your Stakeholders:
3. Understand your key stakeholders
4. Classify by attitude
5. Consider how to manage blockers
6. Document your analysis
7. Communicate with stakeholders

AM level 2 process: Manage readiness & risks

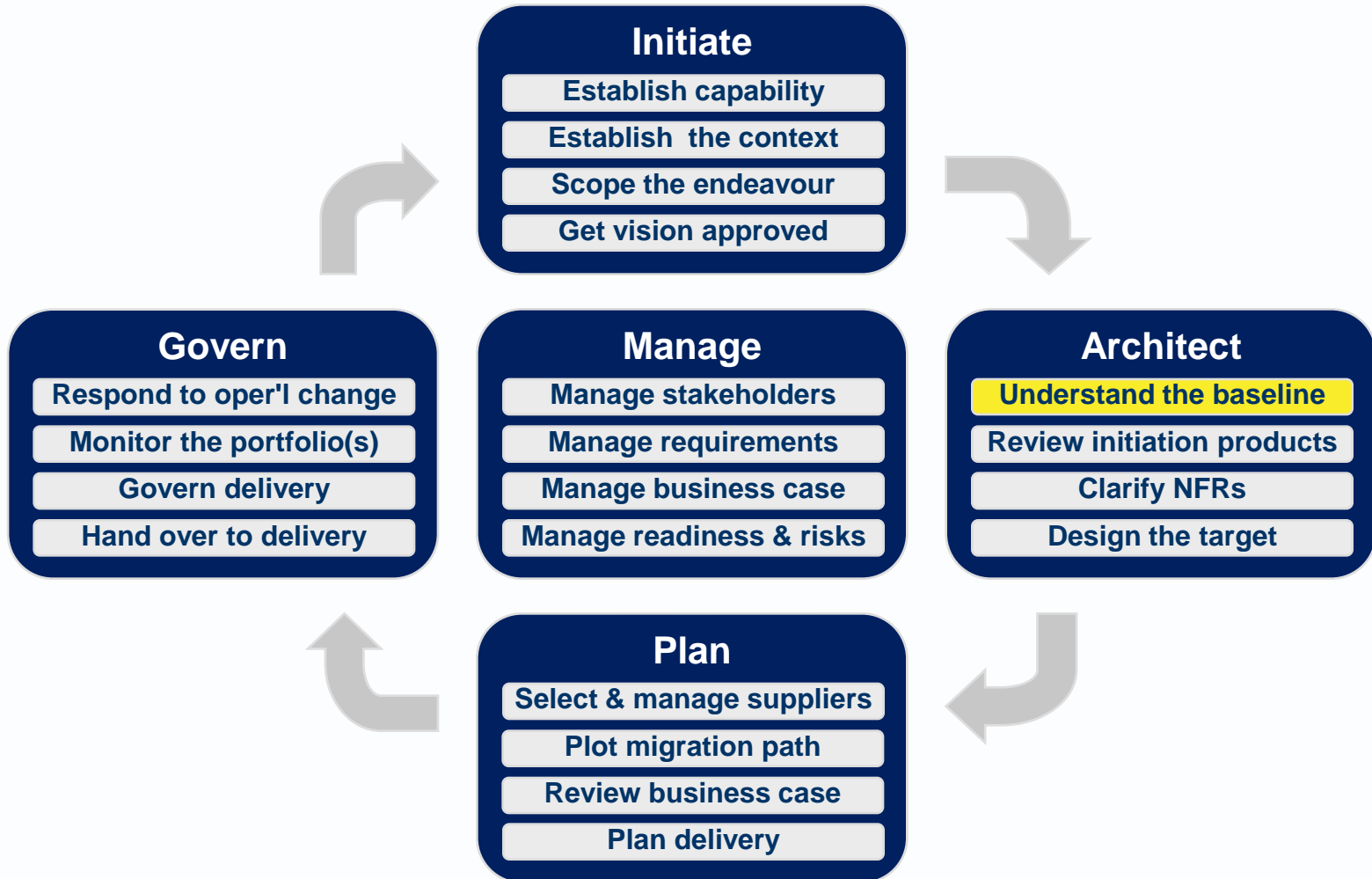


Manage readiness & risks



1. Identify risks
2. Record risks
3. Assess risks
4. Manage risks

AM level 2 process: Understand the baseline



Understand the baseline

1. Understand the baseline business architecture
 2. Understand the baseline data architecture
 3. Understand the baseline applications architecture
 4. Understand the baseline infrastructure architecture
 5. Look for reuse
 6. Assess constraints and opportunities
-
- ▶ The aim is not to analyse the entire estate
 - ▶ Describe only relevant baseline system(s)
 - ▶ Describe only what is needed to enable achievement of goals.
 - ▶ Describe baseline and target the same way as far a possible.
 - ▶ (So the output might take the form of a baseline Solution Outline.)

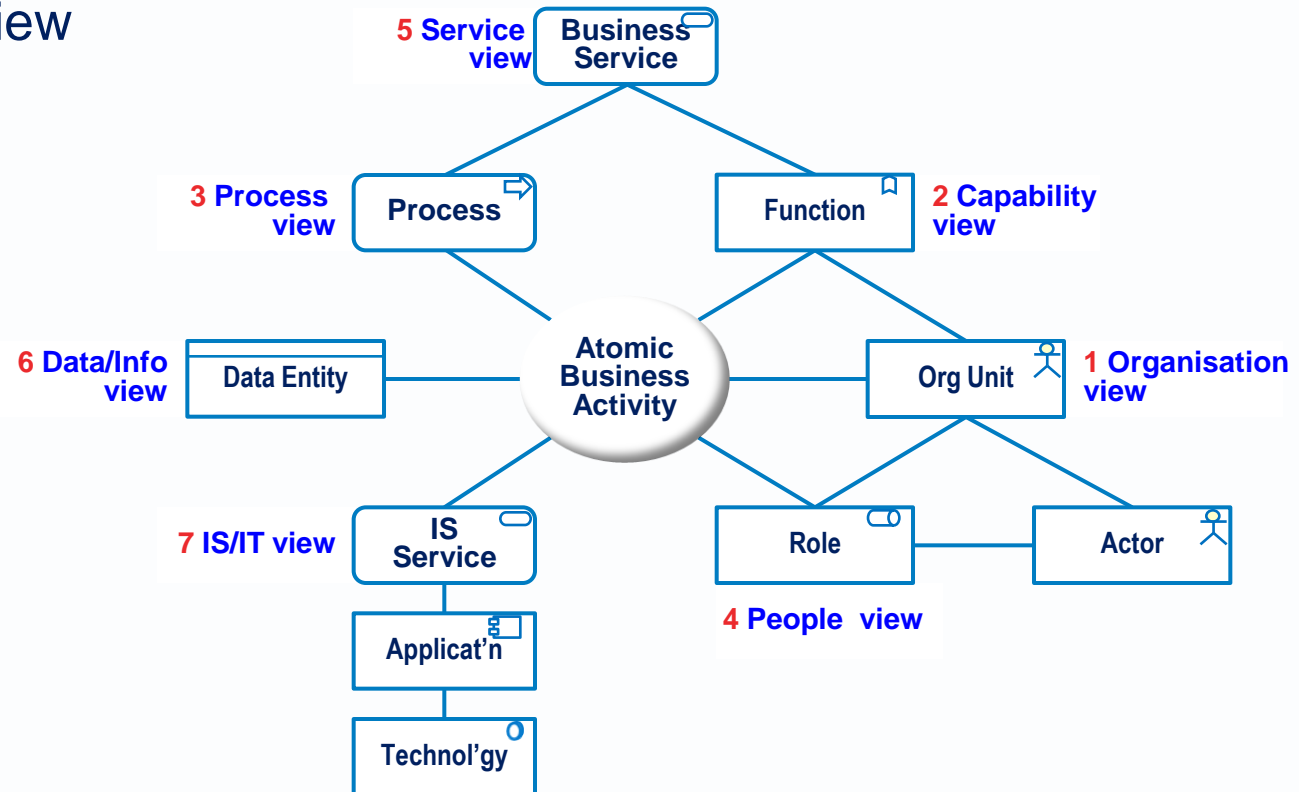
Understand the baseline: architecture domains

- ▶ EA optimises and extends business activities that create and use data.
- ▶ This requires attention to the baseline architecture domains below.

Business architecture	<p>This describes the structural and behavioral elements of a business - the services they provide and their inter-relationships.</p> <p>EA maps business elements to business motivations (drivers, strategies, goals etc.) and to elements of other domains.</p>
Information systems architecture	<p>This describes information systems that support & enable business activities by capturing & providing data.</p> <p>Data Architecture describes business data stores and data flows, the data structures they contain and the qualities of that data.</p> <p>Application Architecture describes business applications - the services they provide to business activities, and their inter-relationships.</p> <p>EA maps data stores, data flows, data entities, applications and application services to each other and to elements of other domains.</p>
Technology (infrastructure) architecture	<p>This describes platform technologies - the services they provide to business applications and their inter-relationships.</p> <p>EA maps technology components and technology services to elements of other domains.</p>

Lower level process: Understand the business architecture (EA)

1. Form an organisation view
2. Form a capability view
3. Form a process view
4. Form a people view
5. Form a service view
6. For a data/info view
7. Form an apps view



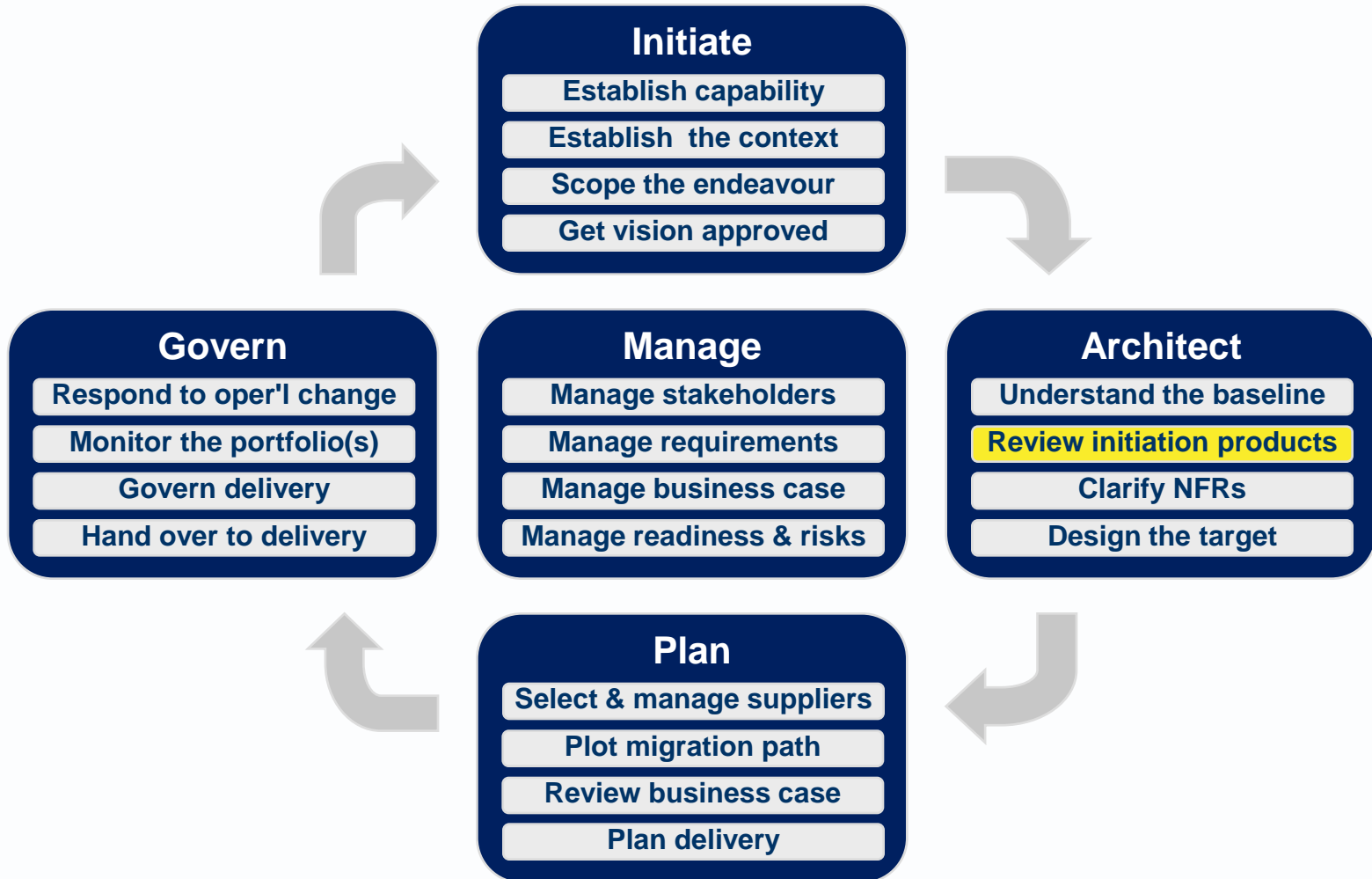
Lower level process: Understand the applications portfolio (EA)

1. Form an organisation/capability view of the applications
2. Form a people (roles) view of the applications
3. Form a data flow view of the applications
4. Form a data store view of the applications
5. Populate EA repository
6. Classify and rank applications

Lower level process: Understand the technology portfolio (EA)

1. Classify baseline platform technologies
2. Catalogue baseline technologies
3. Classify baseline technology services
4. Catalogue baseline technology services (define TRM)

AM level 2 process: Review initiation products



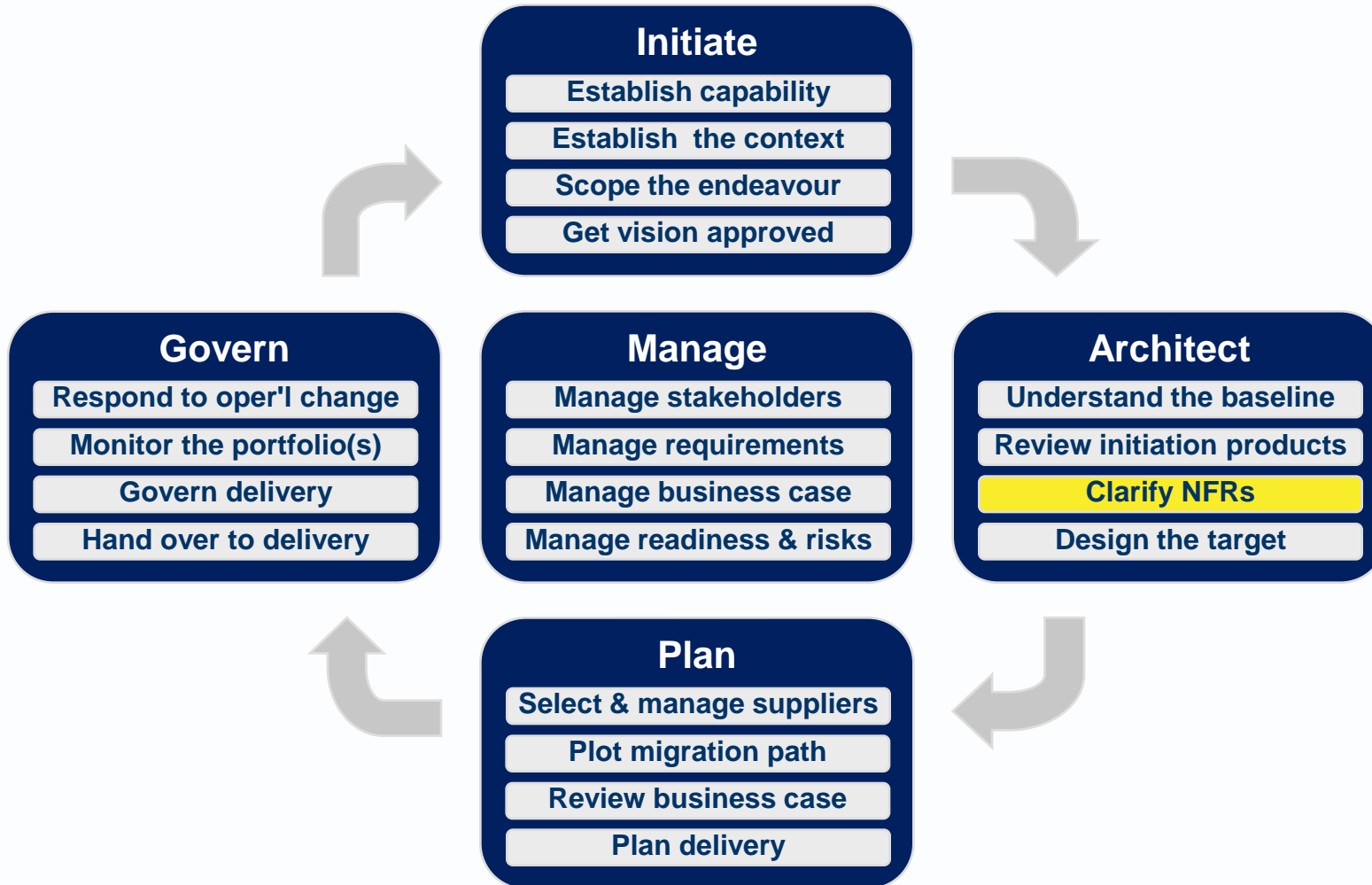
1. Review results of initiation

- Strategies
- Business motivations: drivers, directives and aims
- Business change visions
- Target IT versions
- Constraints on target architecture efforts: time, costs, resources, standards and regulations

2. Build requirements

3. Baseline requirements

AM level 2 process: Clarify the NFRs



Clarify the NFRS

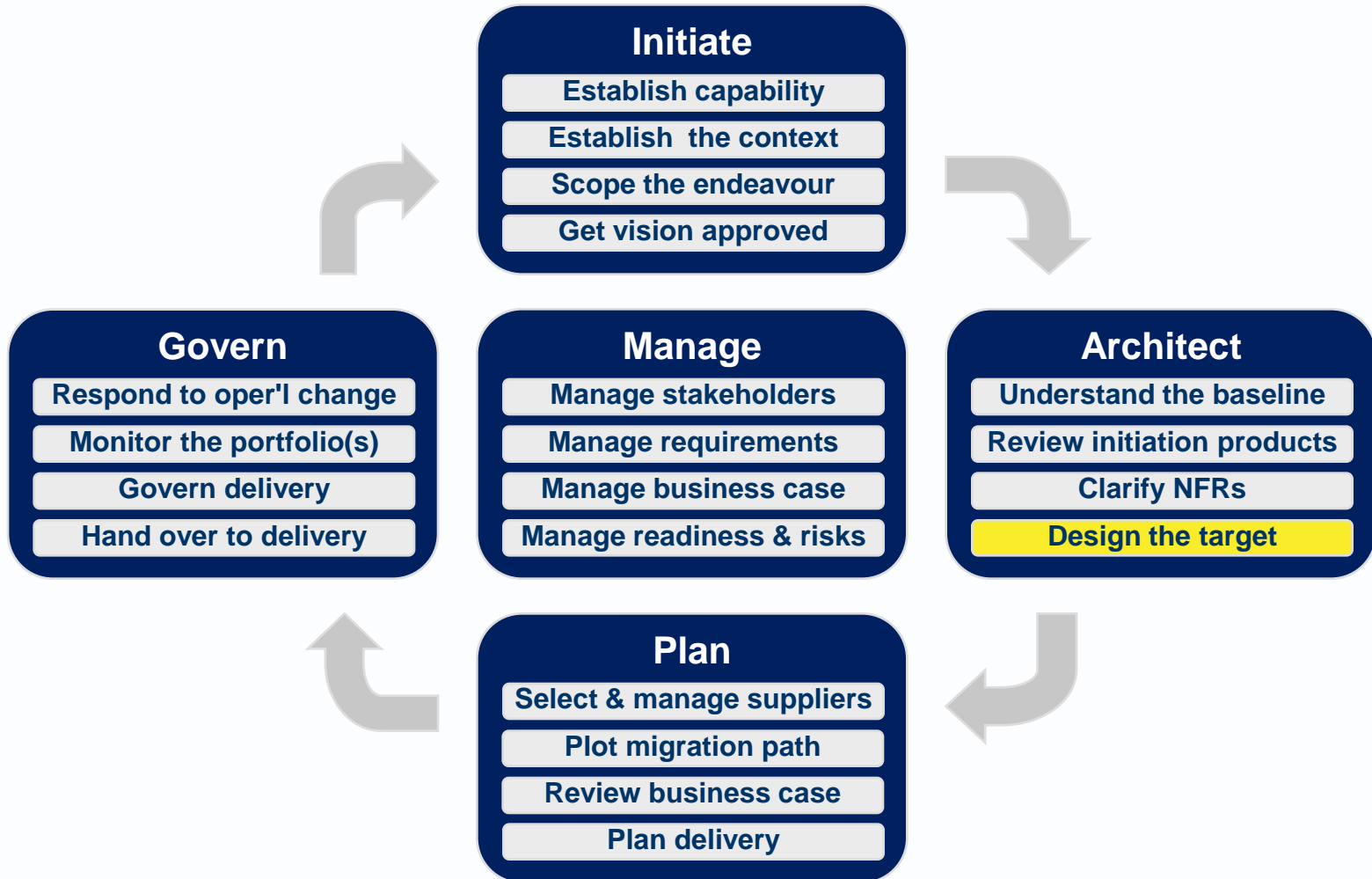
1. Set target measures with flexibility

- Performance (timings and volumes of business done)
- Availability (derived from Reliability and Recoverability)
- Integrity
- Security
- Scalability
- Serviceability
- Usability
- Maintainability
- Portability
- Interoperability
- Extensibility

2. Assess business & IT readiness

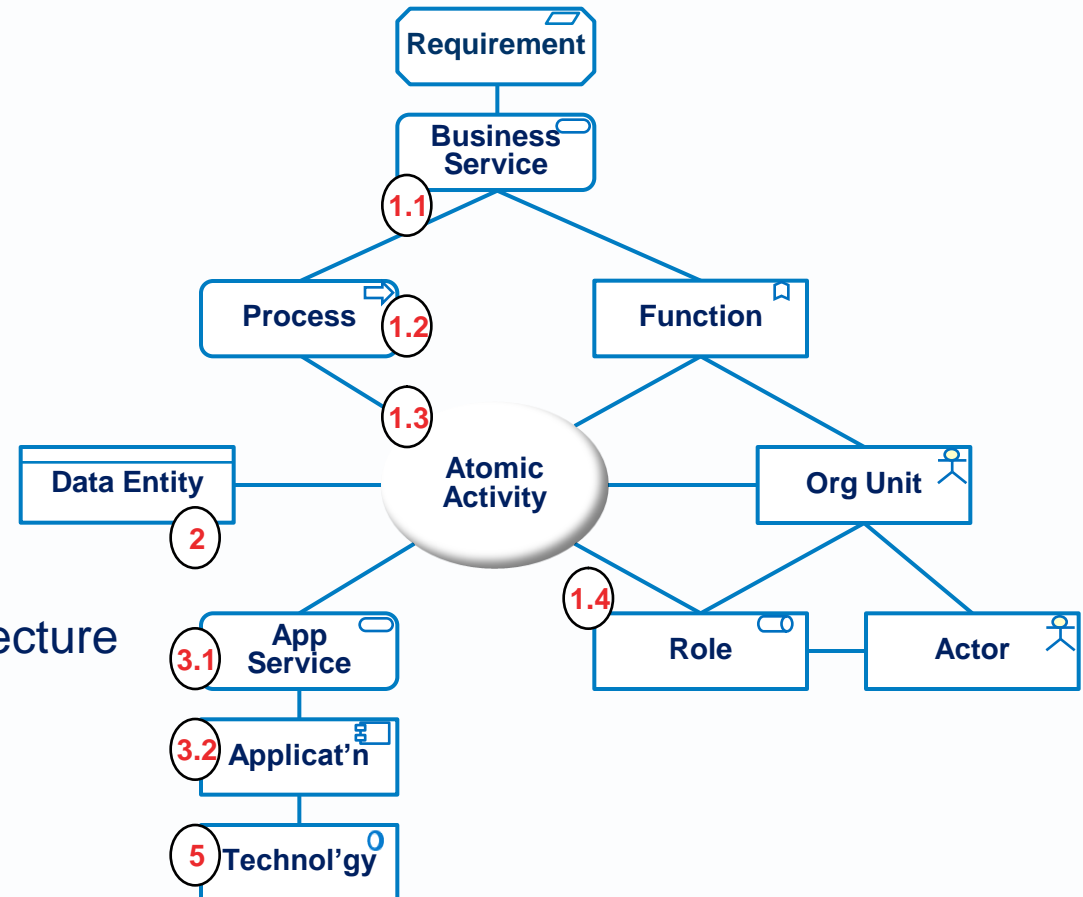
3. Assess non-functional risks

AM level 2 process: Design the target



Design the target

1. Design business architecture
 - Define service view
 - Define process view
 - Define atomic activities
 - Define role view
2. Design data/information view
3. Design applications architecture
 - Define application use cases
 - Define applications view
4. Design to meet NFRs
5. Design platform technology architecture
6. Report the target architecture
7. Review the target architecture



Lower level process: Design target data architecture

1. Identify where data is created and used
2. Define data flows (messages, displays, forms and reports)
3. Define data dictionary or canonical data model
4. Define data store(s): relational and document stores
5. Address data quality issues

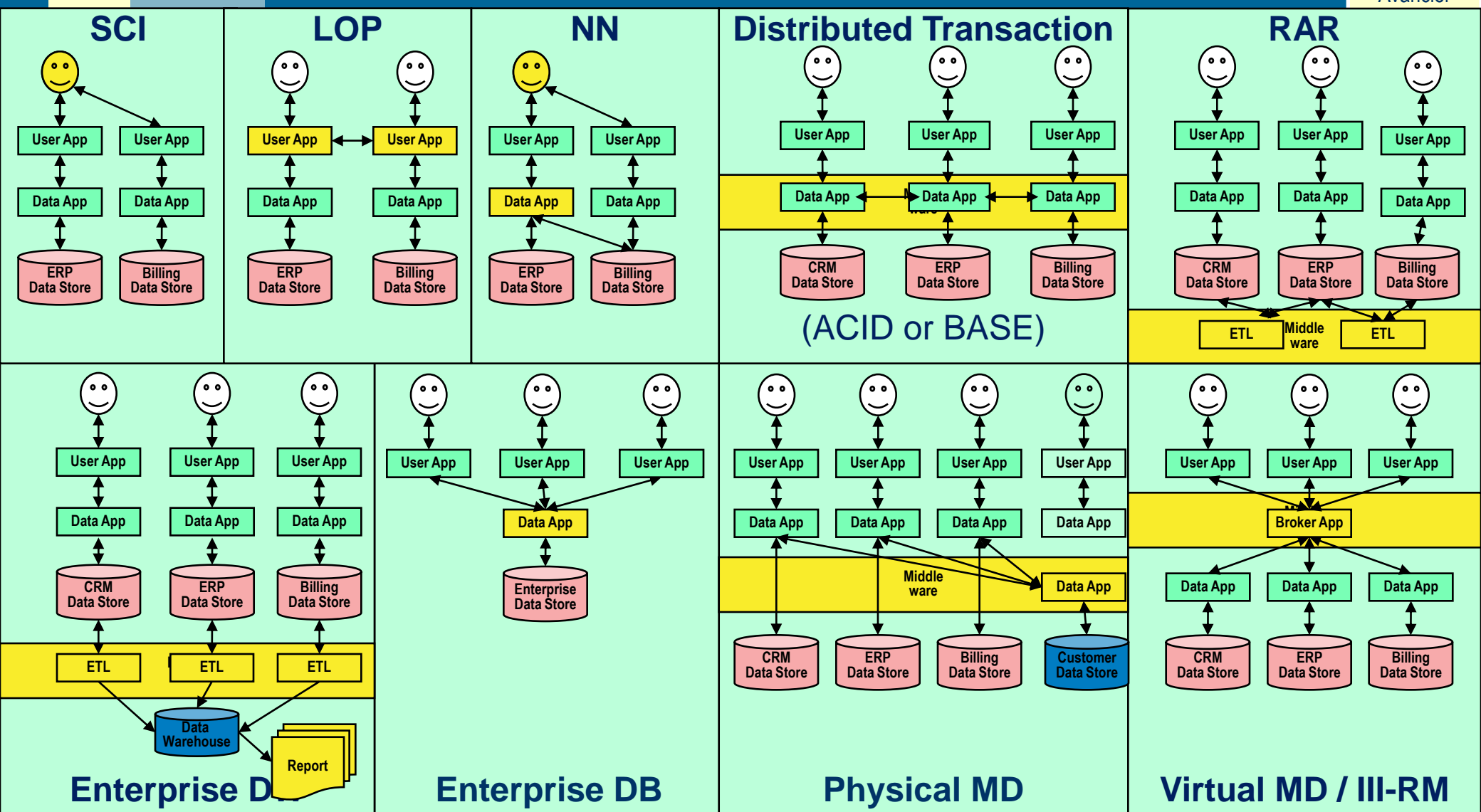
Lower level process: Design target application(s) architecture

1. Identify data flows, data stores and applications in scope
2. Select best-fitting Application Integration Pattern
3. Draw application communication diagram (aka DFD)
4. Draw sequence diagrams for key processes

Lower level process: Design target application(s) uses cases

1. Identify use cases
2. Draw use case diagram
3. Describe use cases
4. Identify automated services

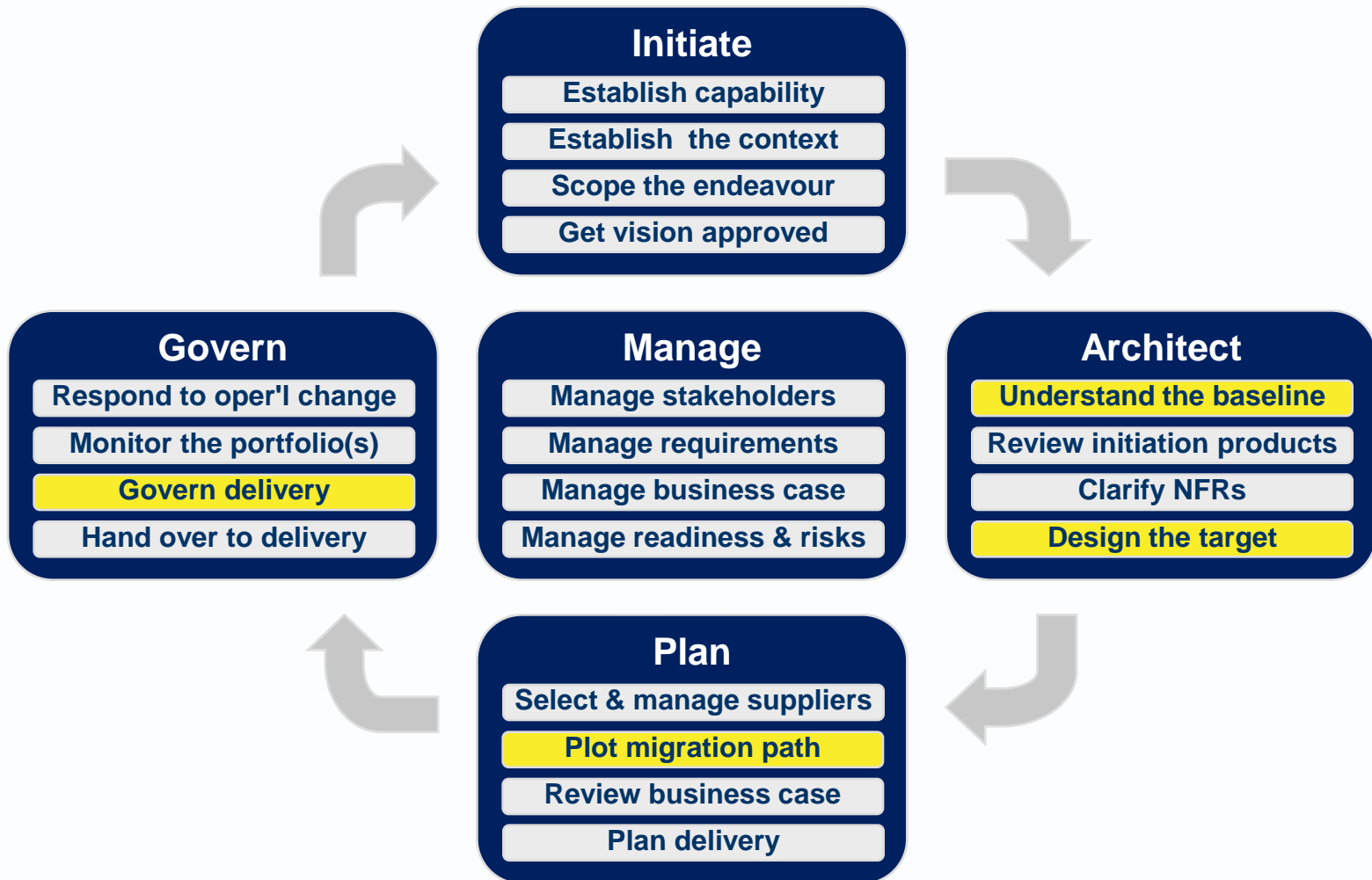
Select best-fitting Application Integration Patterns



Lower level process: Design the Technology Platform for a Solution

1. Identify requirements and context
2. Establish baseline opportunities and constraints
3. Define platform nodes
 - Client nodes
 - Data source nodes
 - Other nodes
4. Map software to platform nodes
5. Map logical nodes to physical nodes
6. Define the network
7. Refine to handle NFRs
8. Define non-production environments
9. Govern deployment and transition into operations

Analyse and Rationalise platform technologies

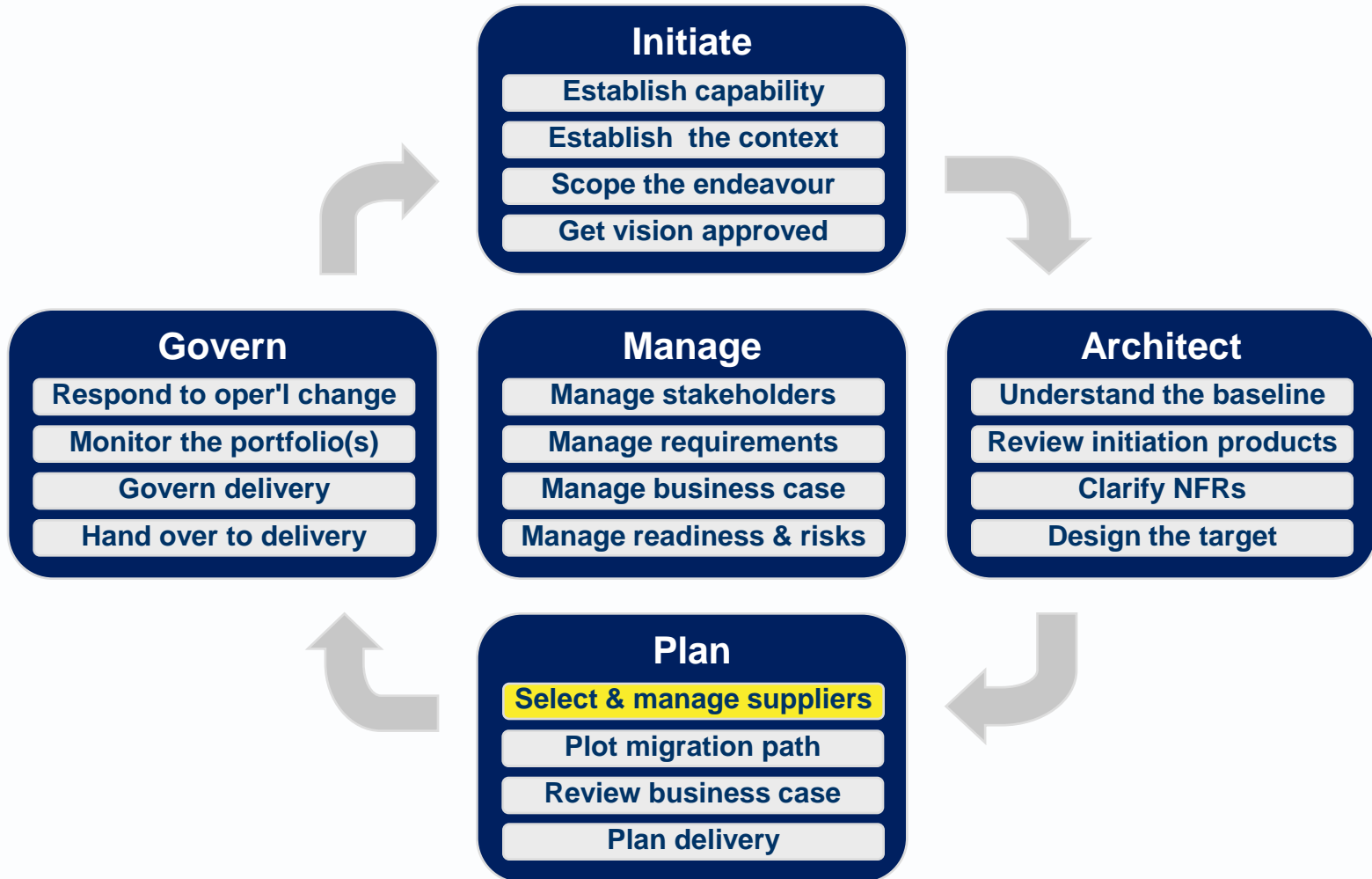


Analyse and rationalise platform technologies (EA)

1. Understand the Baseline
 - Classify baseline platform technologies
 - Catalogue baseline technologies
 - Classify baseline technology services
 - Catalogue baseline technology services
2. Design the Target
 - Define target technology services
 - Define target technology components
3. Plan baseline-to-target migration
4. Govern delivery of the change.

A process (after TOGAF) for studying the services provided by baseline technologies and de-duplicating the target architecture

AM level 2 process: Select and manage suppliers



1. Select suppliers

1. Establish Criteria for Suppliers
2. Establish Criteria for Proposals
3. Informed Short Listing
4. Write your objectives in the RFP
5. Distribute RFP
6. Allow Enough Time for Proposal
7. Maintain a Level Playing Field
8. Receive and Score Proposals
9. Review criteria
10. Iterate if need be
11. Receive Final Presentations
12. Update Scoring
13. Final Selection
14. Due Diligence

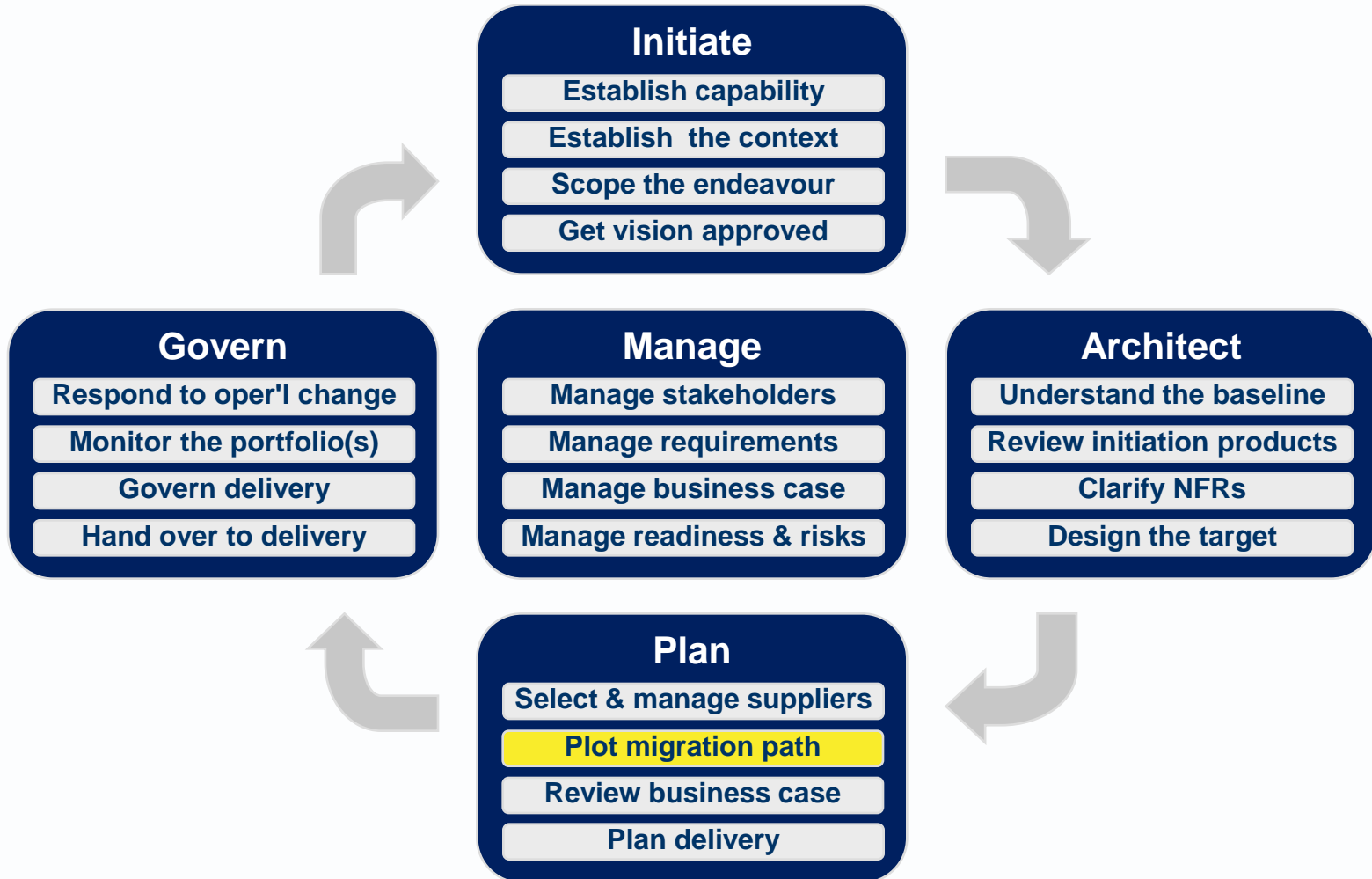
Adapted from the 10 Step Approach to Selecting the Right SAP Systems Integrator by Michael Doane

A generic process that can be used a various points in the architecting and planning of a work programme.

2. Manage suppliers

3. Assess supplier dependency risks

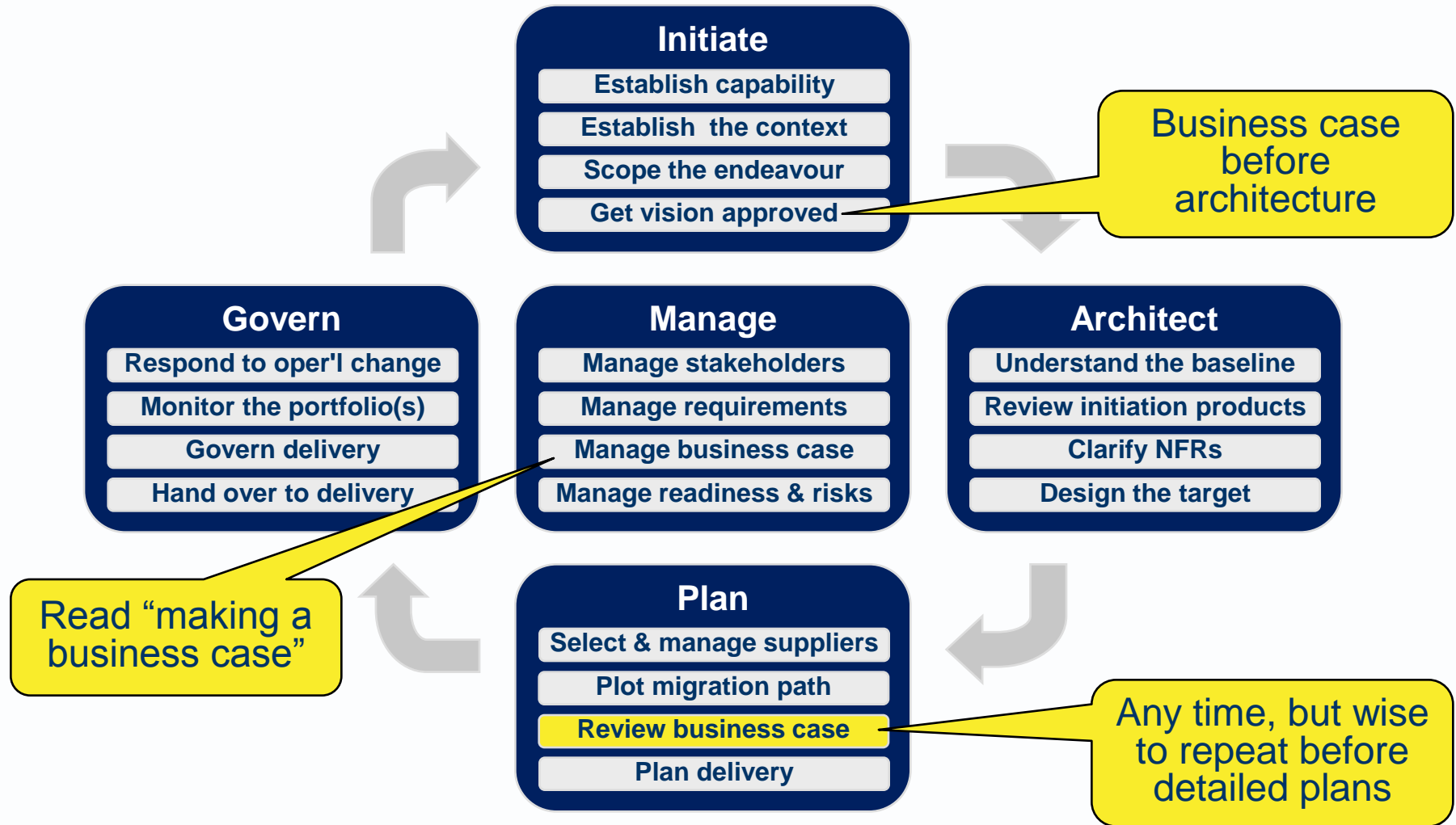
AM level 2 process: Plot migration path



Plot migration path

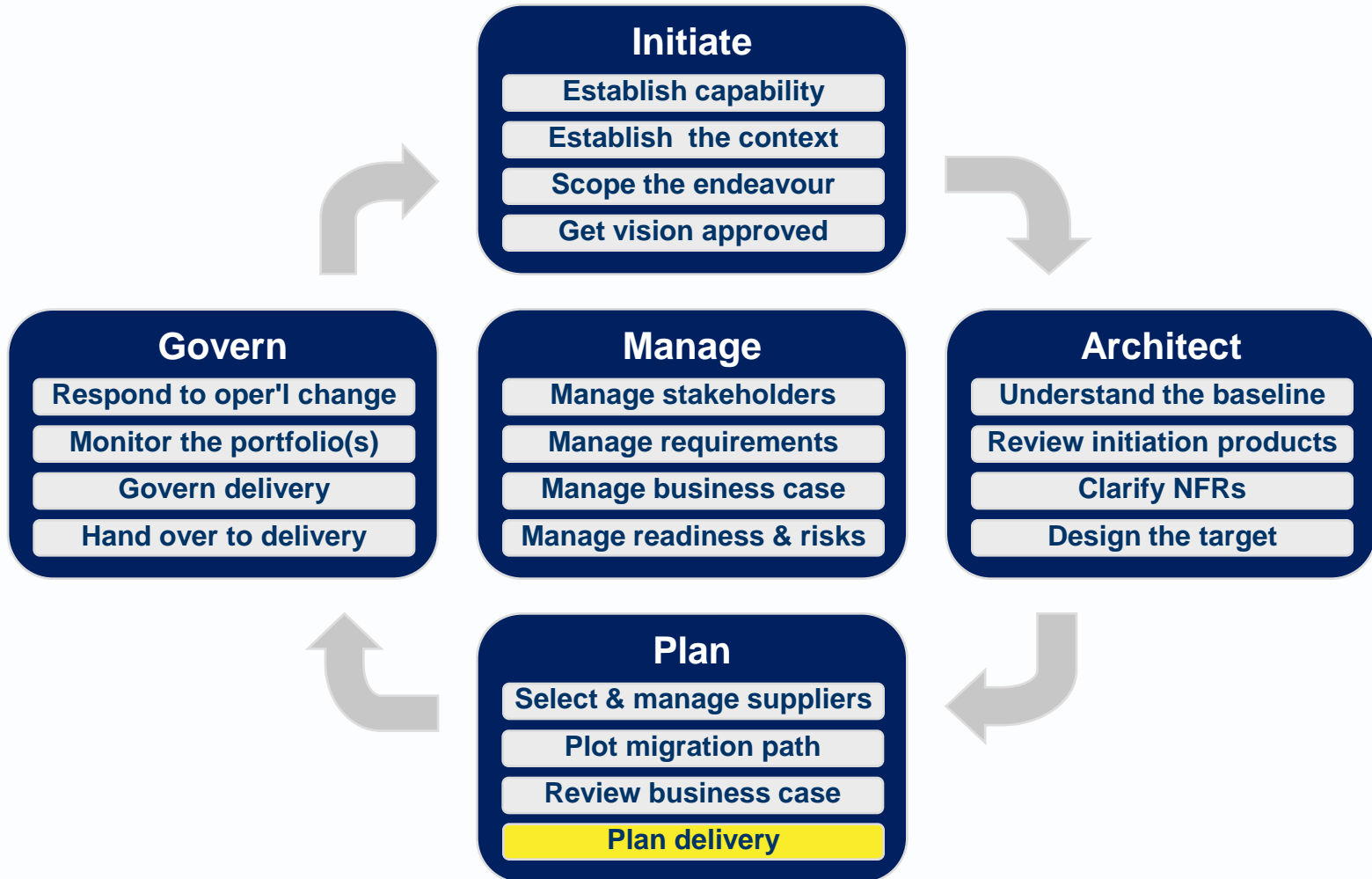
1. List changes
2. Identify risks, costs and values
3. Prioritise changes
4. Plot migration path

AM level 2 process: Review business case



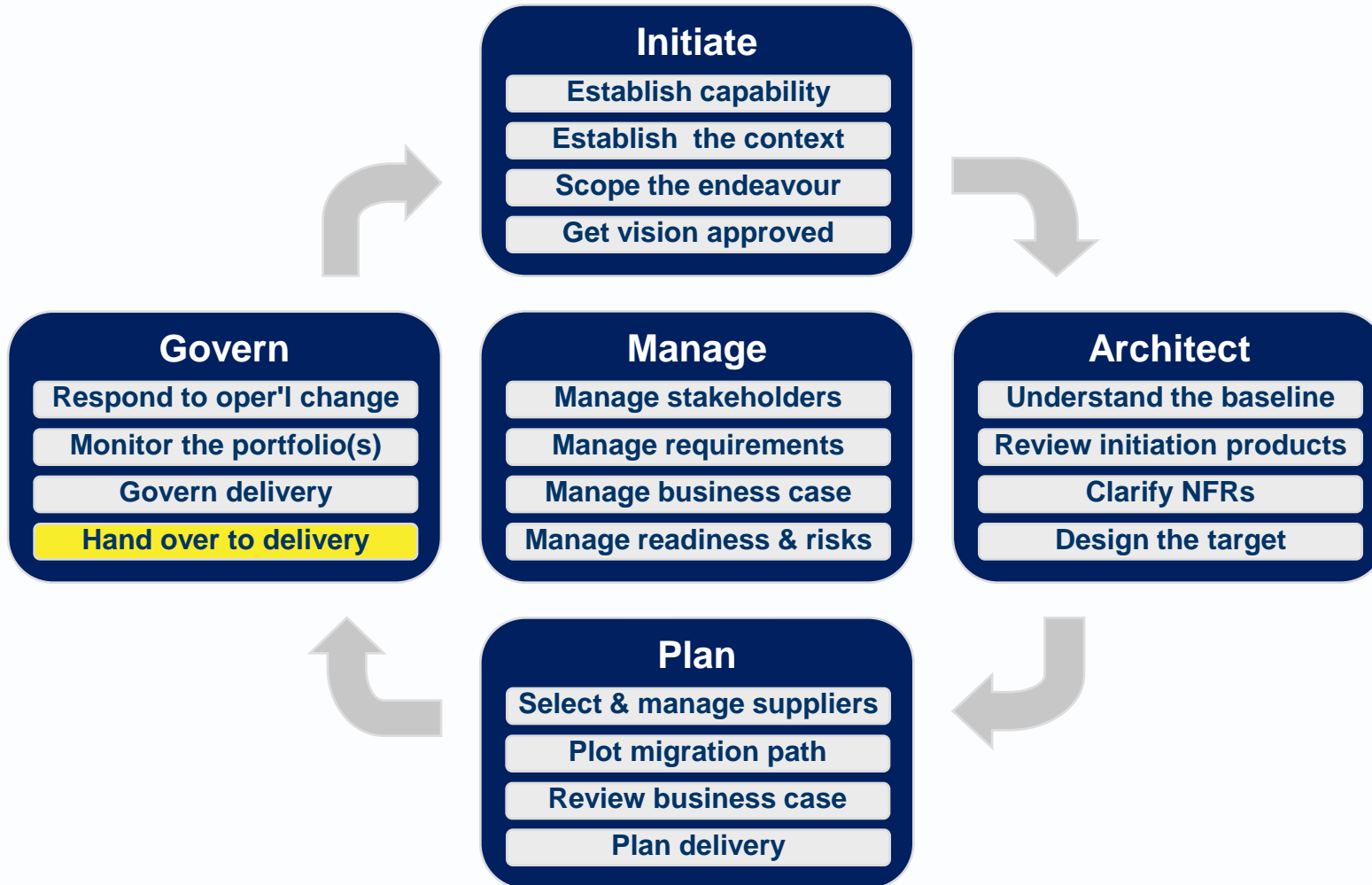
1. Analyse solution or solution options
 - costs and benefits
 - risks
 - gaps between options
 - trade offs between option qualities
2. Confirm chosen option

AM level 2 process: Plan delivery



1. Chart initial roadmap
2. Help managers complete detailed plans
3. Plan implementation governance

AM level 2 process: Hand over to delivery



AM level 2 process: Hand over to delivery



1. Collect all relevant documentation
2. Assess project suitability for agile development methods
3. Agree subsequent engagement

Assess project suitability for agile development methods

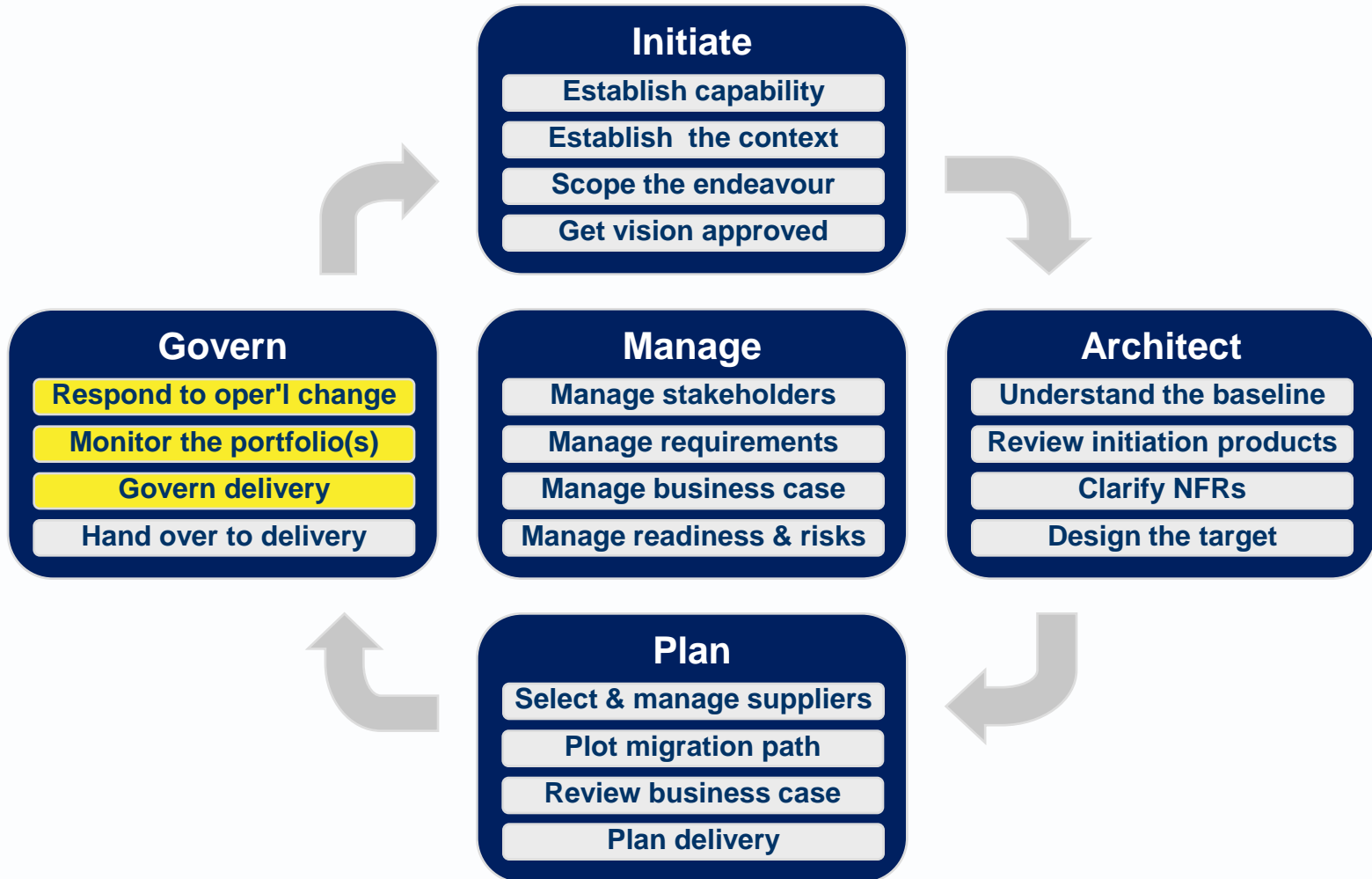
- ▶ It is important to recognise some projects/systems are more suitable for agile development methods than others
- ▶ High scores make agile methods difficult (but not a bad thing)

What kind of project?		
Time/cost-driven	0, 1, 2, 3	Mandatory requirements-driven
Users available for Joint App Dvlpmnt	0, 1 , 2, 3	Users not available
Developers empowered	0, 1, 2, 3	Developers not empowered
What kind of system and work?		
Divisible into usable releases	0, 1, 2, 3	Indivisible
Client/user interface dominated	0, 1, 2, 3	Server/database dominated
Output/enquiry dominated	0, 1, 2 , 3	Input/update dominated
Simple data processing (row-level CRUD)	0, 1, 2, 3	Complex data processing
On-line	0, 1, 2, 3	Batch
Stand-alone	0, 1 , 2, 3	Highly integrated w other systems
Add up the scores for your agile potential quotient		

Agilists favour

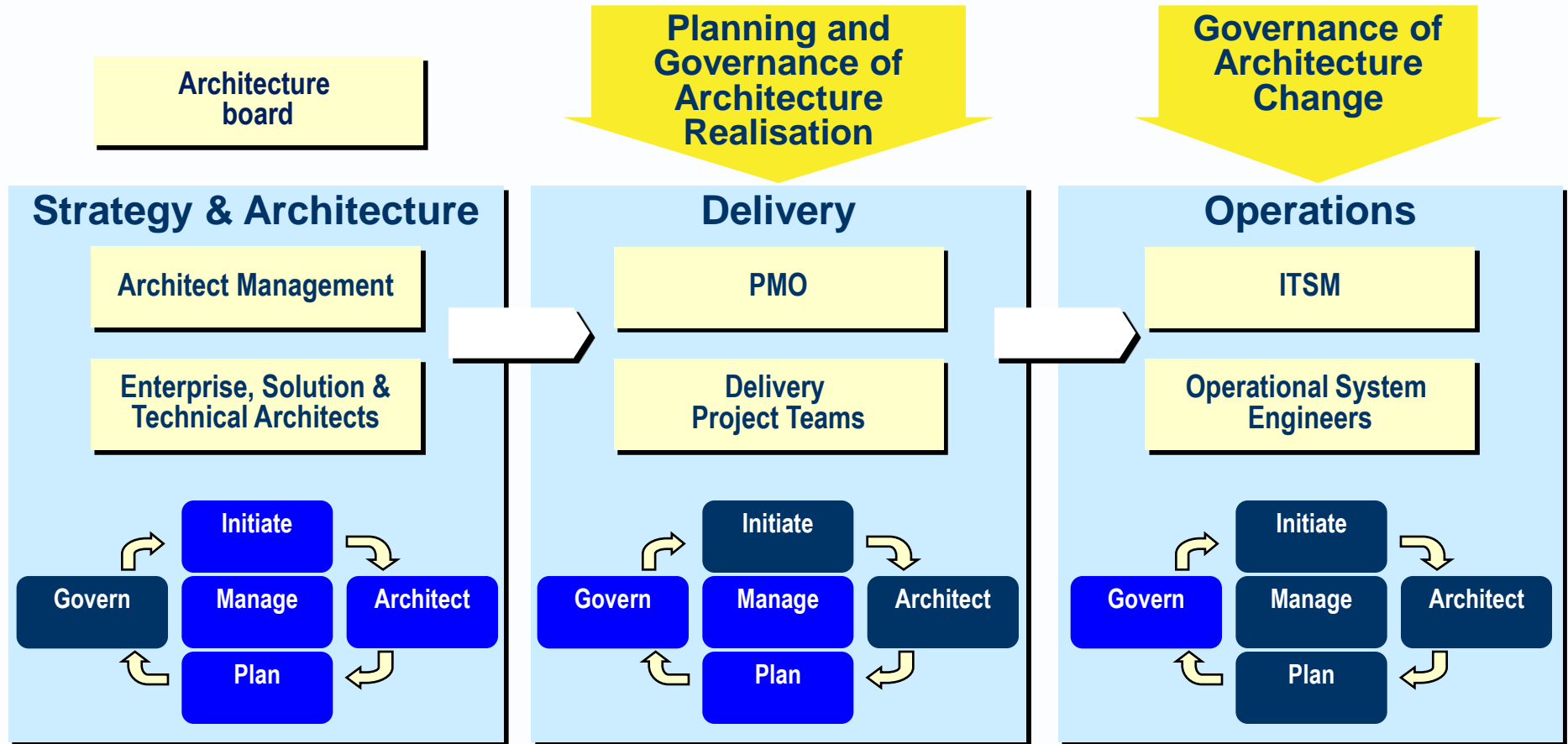
Difficult projects

AM level 2 processes: Govern delivery and change



Governance of Delivery and Operations

► Engaged with PMO and ITSM



AM level 2 process: Govern delivery

1. Share governance expectations
2. Schedule a review
3. Prepare for review
4. Carry out review
5. Report results

Footnotes



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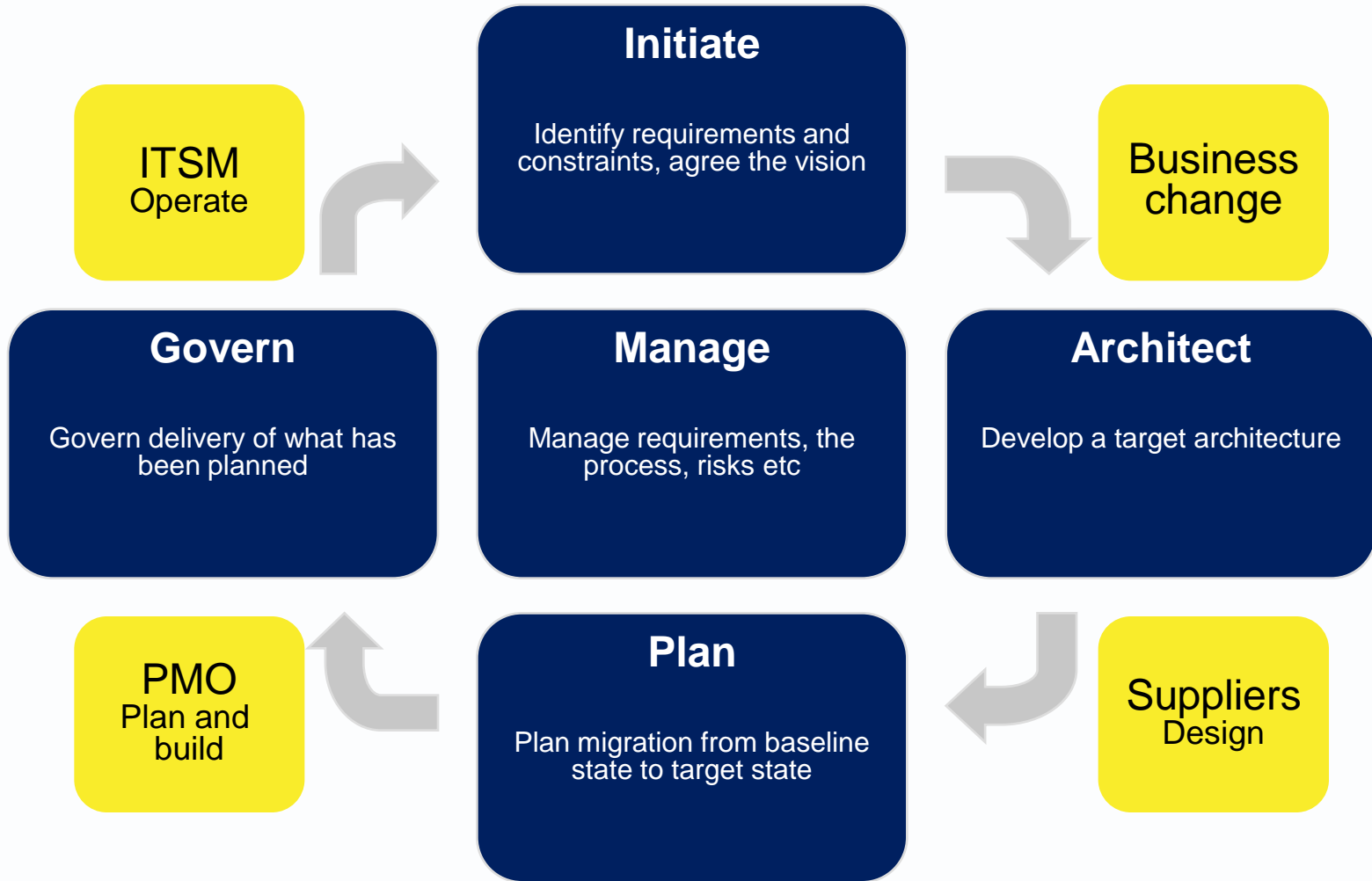
Map the architecture process to established process milestones

A milestone is a stop/go point at which

1. Progress is tested against defined criteria
2. Impacts from and on other parallel activities are considered
3. Stakeholders are invited to review deliverables and approve further

INITIATE	Example PMO milestones
Establish capability Establish the context	Discover
Scope the endeavour Get vision approved	Vision
ARCHITECT	
Understand the baseline Review results of initiation Clarify NFRs Design the target	Outline
PLAN	
Select suppliers Plot migration path Review the business case Plan delivery	Commit
GOVERN	
Hand over to delivery Govern delivery	Deliver
Monitor portfolios Respond to operational change	Monitor

Adapt the framework to work with other functions/processes



Enhance TOGAF with Avancier Methods

TOGAF's ADM is a management framework that promotes the role of architects

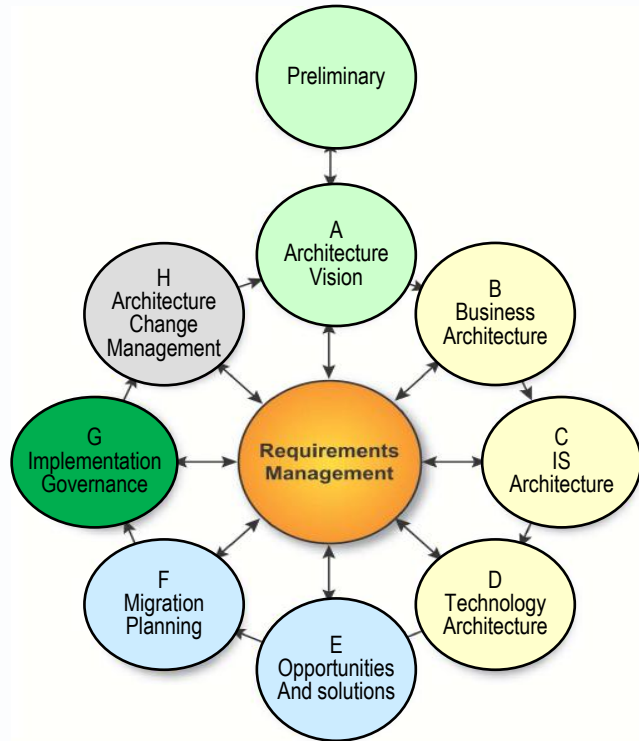
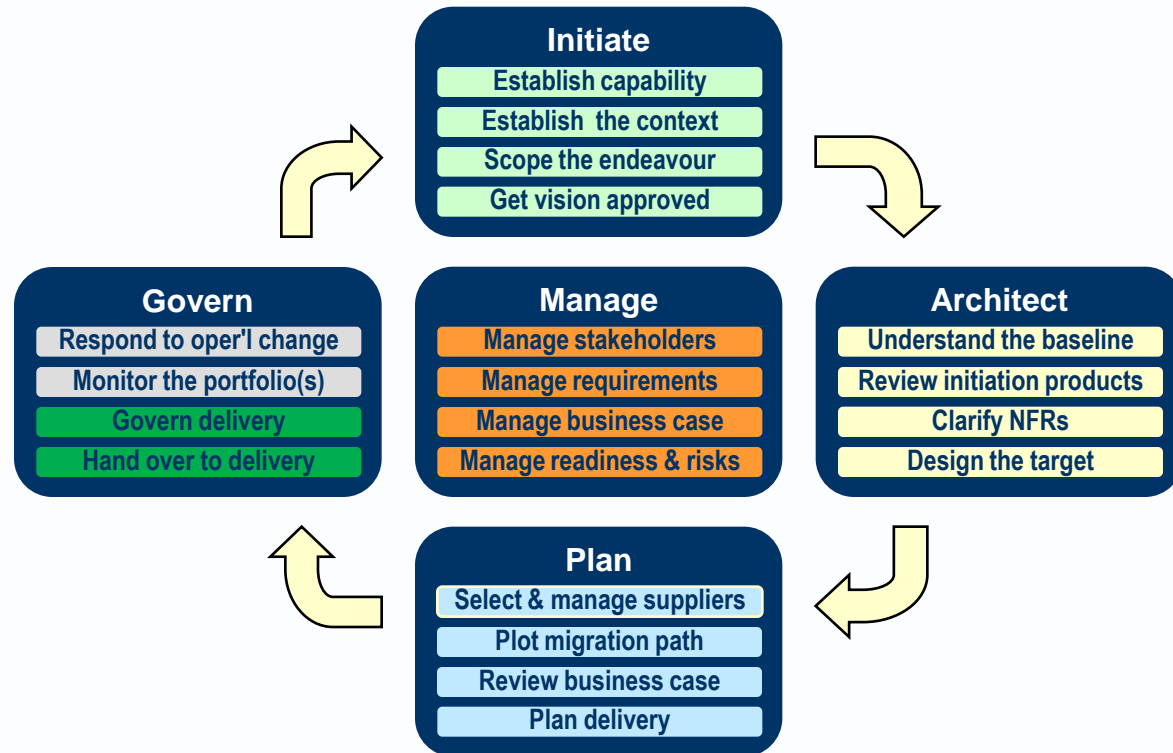


Figure 5-1 Architecture Development Cycle

AM gives architects more specific processes, techniques and documentation guidance



How Avancier Methods complement TOGAF

- ▶ AM focuses more architecture work itself – while still remaining technology independent.
- ▶ AM suits those working software development, systems integration and infrastructure who find TOGAF too abstract or removed from their day job

- ▶ Hi Graham, in trying to find a methodology to use at my new company for solutions architecture, I came across Avancier Methods.
- ▶ It looks more aligned to what I need than TOGAF, so thank you!

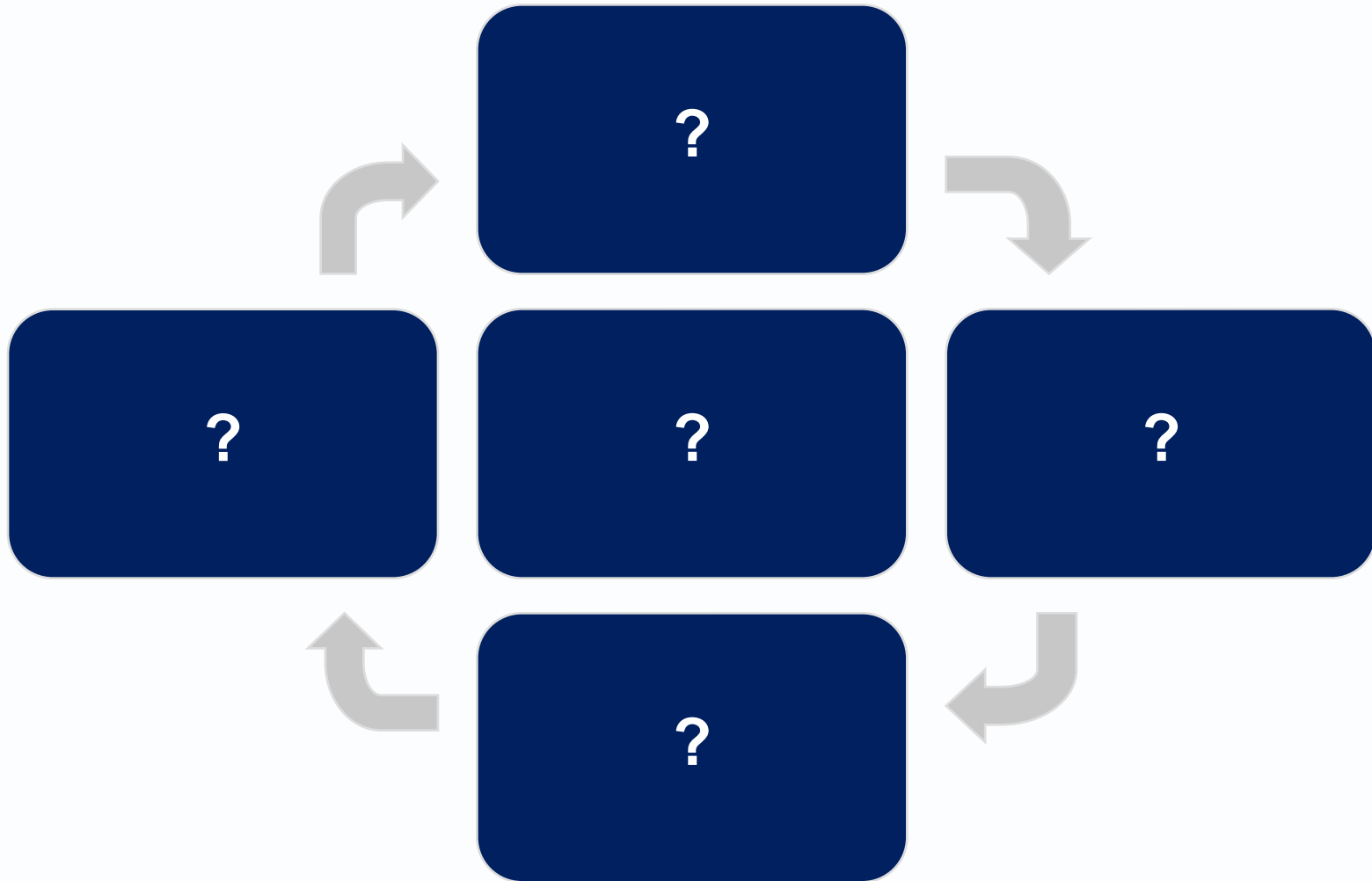
- ▶ AM helps people to better understand and appreciate what TOGAF offers by way of management framework
- ▶ Like TOGAF, it is assumed the people have some experience of business, data, apps or infrastructure architecture before they attend training, it is not for beginners in IT.

More value added to the training

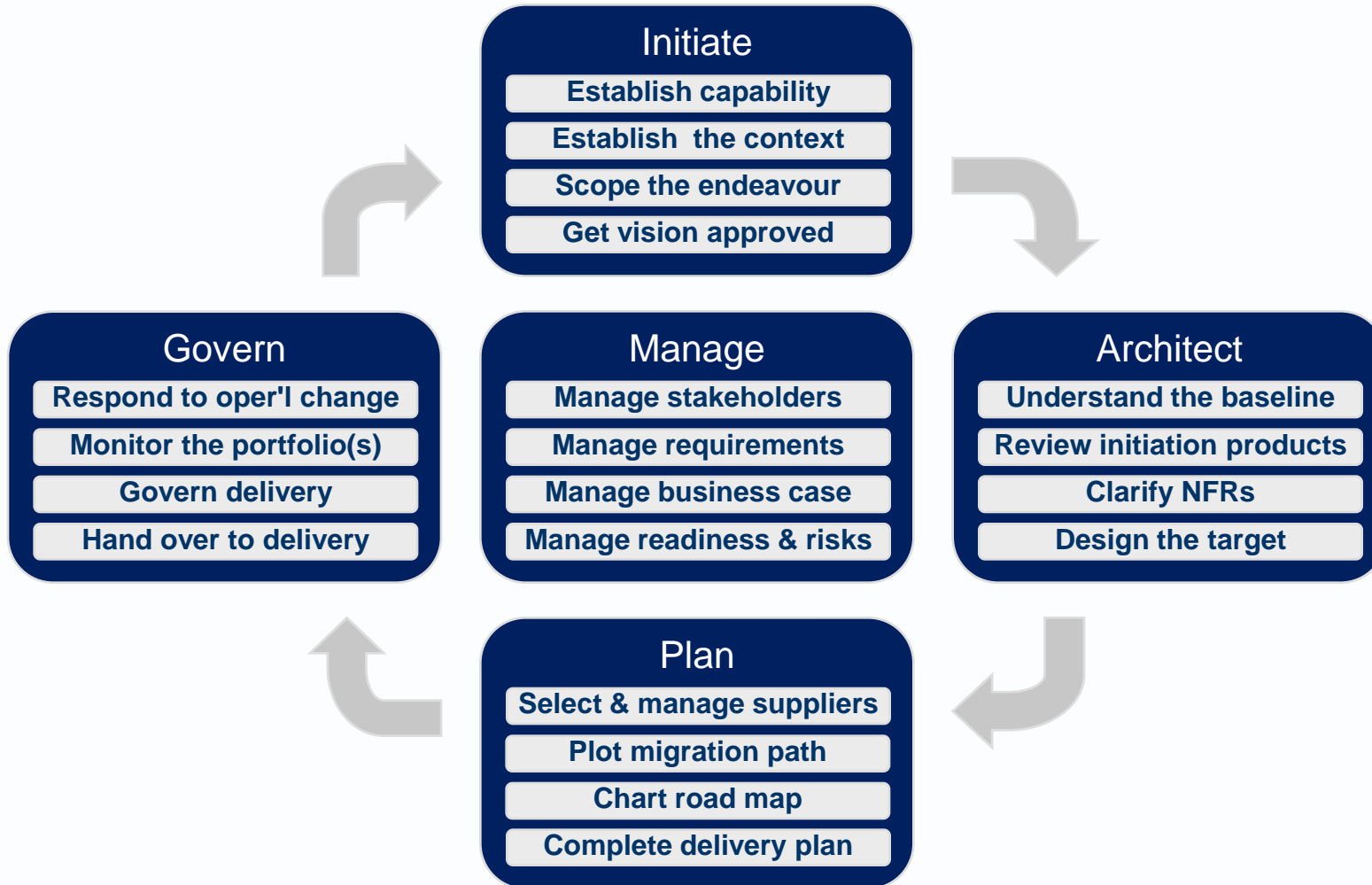
- ▶ The web site (avancier.website) includes
 - c100 papers and presentations that make up “Avancier Methods”
 - c200 additional papers and presentations

- ▶ The training materials include substantial additional chapters on
 - Design for NFRs
 - 80 Architecture Principles
 - Solution Outline documentation

Q) Name the 5 “phases” of AM (and any content you remember)



A) Answer



Q) Which is true?

1. AM is technology dependent?
2. The primary training course aim is to explain AM?
3. The primary training course aim is to teach general architect terms, concepts and techniques?
4. TOGAF or BCS certification proves you are an architect?

A) Answer

1. AM is technology dependent? No
2. The primary training course aim is to explain AM? No
3. The primary training course aim is to teach general architecture terms, concepts and techniques? Yes
4. TOGAF or BCS certification proves you are an architect? No