Avancier Methods (AM)
PLAN

Plot migration path
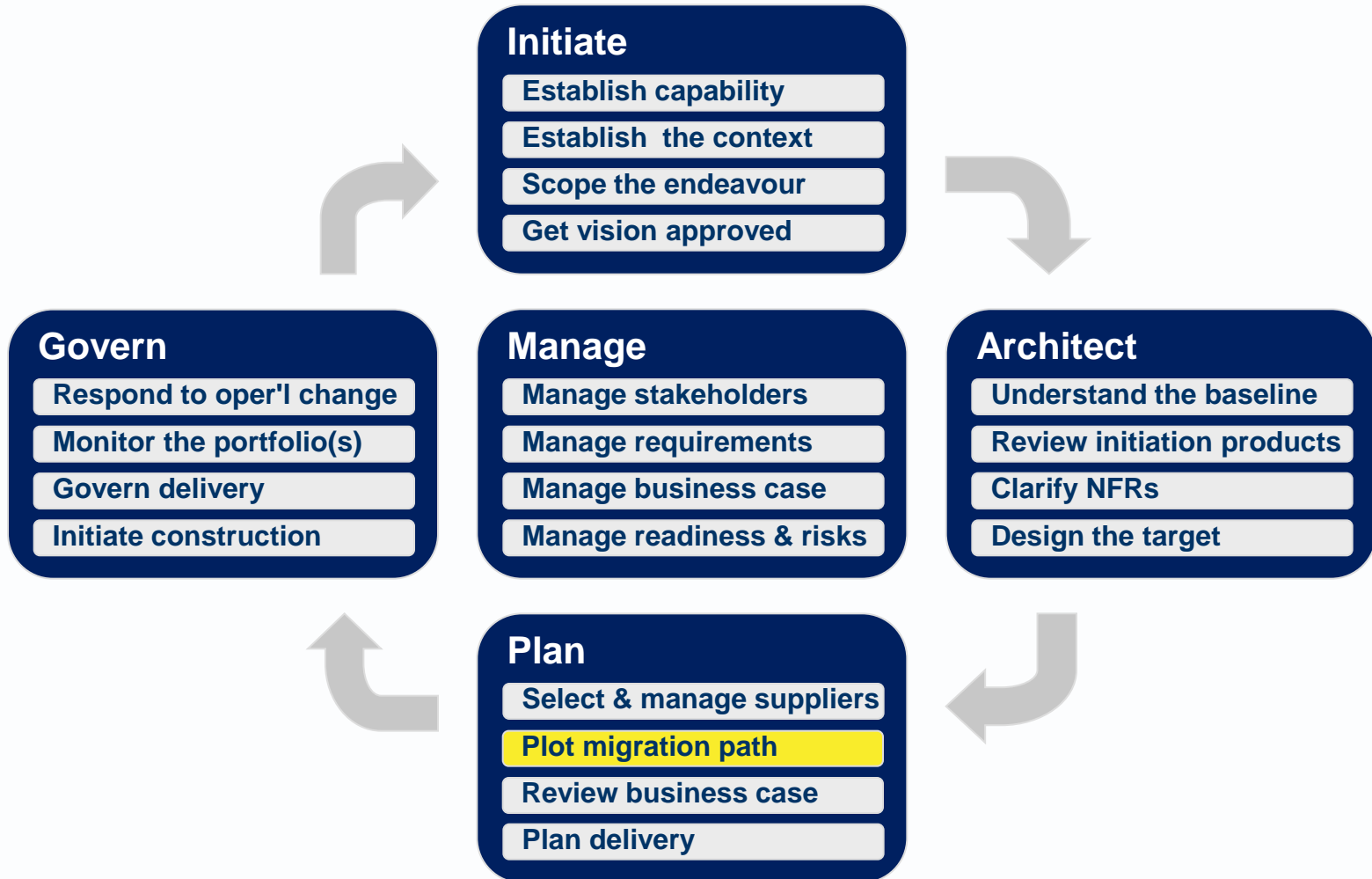
It is illegal to copy, share or show this document
(or other document published at http://avancier.co.uk)
without the written permission of the copyright holder

Migration planning	[a work process] for turning baseline and target architecture descriptions into a plan for a programme or project. Architects should integrate the process into local programme/project management approaches such as MSP, PRINCE2 or PMI.

Plot migration path (in AM)

Initiate
- Establish capability
- Establish the context
- Scope the endeavour
- Get vision approved

Govern
- Respond to oper'l change
- Monitor the portfolio(s)
- Govern delivery
- Initiate construction

Manage
- Manage stakeholders
- Manage requirements
- Manage business case
- Manage readiness & risks

Architect
- Understand the baseline
- Review initiation products
- Clarify NFRs
- Design the target

Plan
- Select & manage suppliers
- Plot migration path
- Review business case
- Plan delivery

Plot migration path (in AM)

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

Avancier

Gap analysis (baseline-target)	[a technique] for comparing two similar structures, to find items in one that are not in another. It is used in architecture frameworks to compare the elements of a baseline system with those of a target system, where each gap implies work to be done.

Migration Business to IT	Baseline	Target
	Gaps	
Business	Process Organisation Locations	Process Organisation Locations
Information Systems	Data Applications	Data Applications
Technology	Infrastructure Technologies	Infrastructure Technologies

List business changes

- ► Staff job descriptions and procedures
- ► Hiring, firing and retraining staff
- ► Buying and selling equipment
- ► Opening and closing buildings.

Migration Business to IT	Baseline	Target
	Changes	
Business	**P**rocess **O**rganisation **L**ocations	**P**rocess **O**rganisation **L**ocations
Information Systems		
Technology		

► App buy or build

► Data population or migration from old database(s) to new one(s)
  ■ source(s)
  ■ target(s) and
  ■ volume(s) of data to be migrated
► Options include
  ■ Big bang migration (ETL)
  ■ Continuing transformers (EAI)
  ■ On the fly migration
► Data cleansing to enable data migration
► Replacement of interfaces to related systems by new ones
► Rewriting of code to different architectural standards
► Retraining of users

Migration Business to IT	Baseline	Target
	Changes	
Business		
Information Systems	**Data** **Applications**	**Data** **Applications**
Technology		

List IT changes

▶ Installation or upgrading of

- Client-side devices and software
- Server-side devices, OS and platform software
- Networks and security measures

Migration Business to IT	Baseline	Target
Business		
Information Systems		
Technology	Infrastructure Technologies	Infrastructure Technologies

Changes

Identify risks, costs and values

► **Identify risks**
► **Record risks**
► Assess risks
► Identify costs & values

RAID catalogue	A catalogue of risks, assumptions, issues and dependencies, which may be cross-referred to elements in requirements and/or solution documentation. Cf. Risk Register in PRINCE2.
Risk	A potential problem; an event that will cause an issue if it occurs.
Assumption	Statement that, if not true, could turn into a risk or issue that threatens the success of a project.
Issue	A problem that needs resolution. Sometimes the realisation of a pre-identified risk, or an assumption that proved false.
Dependency (risk sense)	A dependency of a project upon an external actor or deliverable, not under the management of the project manager.

Avancier

► Identify risks
► Record risks
► **Assess risks**
► Identify costs & values

Risk analysis	Analysis of vulnerabilities that threaten the ability of a target system to meet requirements, especially non-functional requirements, including security. Risk analysis is needed before architecture definition starts in earnest, and then several times later in the process, and at several levels of design.

Identify risks, costs and values

- ▶ Identify risks
- ▶ Record risks
- ▶ **Assess risks**
- ▶ Identify costs & values

Likelihood Impact	Low	Medium	High
High	3 + 1	3 + 2	3 + 3
Medium	2 + 1	2 + 2	2 + 3
Low	1 + 1	1 + 2	1 + 3

- ▶ Classify risks and prioritise them.
- ▶ A matrix of 9, 16 or 25 cells is commonly used
- ▶ Risk quantification may be to imprecise for more than 9 cells.
- ▶ A 100% likely risk is an issue - to be dealt with now

Avancier

Identify risks, costs and values

Avancier

► Identify risks

► Record risks

► Assess risks

► **Identify costs & values**

  ■ ROI = benefits – costs over a time period

We'll return to business cases later

► Define target scope: hard or soft
► Define change characteristics
► Prioritise changes

Define target scope: soft or hard

► The further away the target in time, and the less certainty or control the customer has,

► the more likely
- things will change
- the target scope is soft and
- the migration path will be defined incrementally.

► A service provider may prefer a hard scope
- since it yields a large and long term programme of work.
- will want to demonstrate some quick wins
- to establish the credibility of a longer term plan.

► "Given a stack of potential projects, compare accounting for their business **value** as well as **cost** and **risk**."

► "Many develop their own evaluation and ranking tools, which help them focus on the factors that matter most to their organization."

Quoted from research by Alice Dragoon © 1994 - 2011 CXO Media Inc. a subsidiary of IDG Enterprise

E.g.

Circle size = change cost

A

B

C

D

E

Value

F

G

H

Risk (of failure)
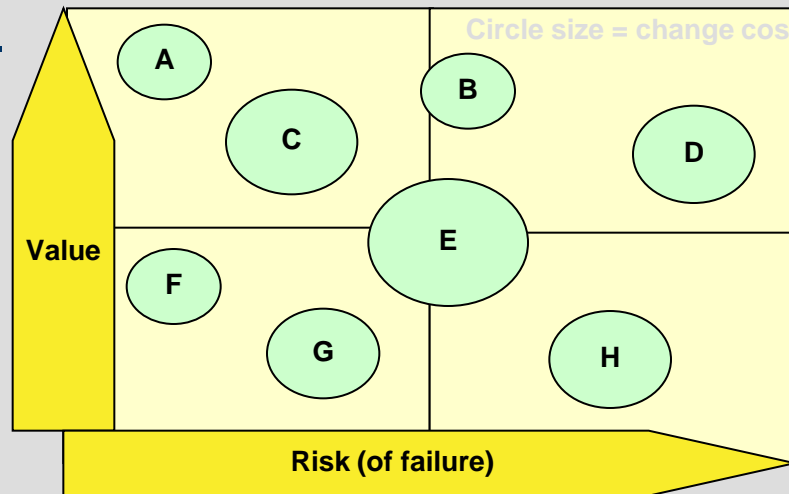
Draw a Value, Cost and Risk Grid (as in TOGAF)

Exercise:

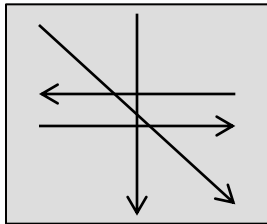▶ **List projects A-H in order of completion or delivery**

▶ E.g. Quick wins (LHF)?
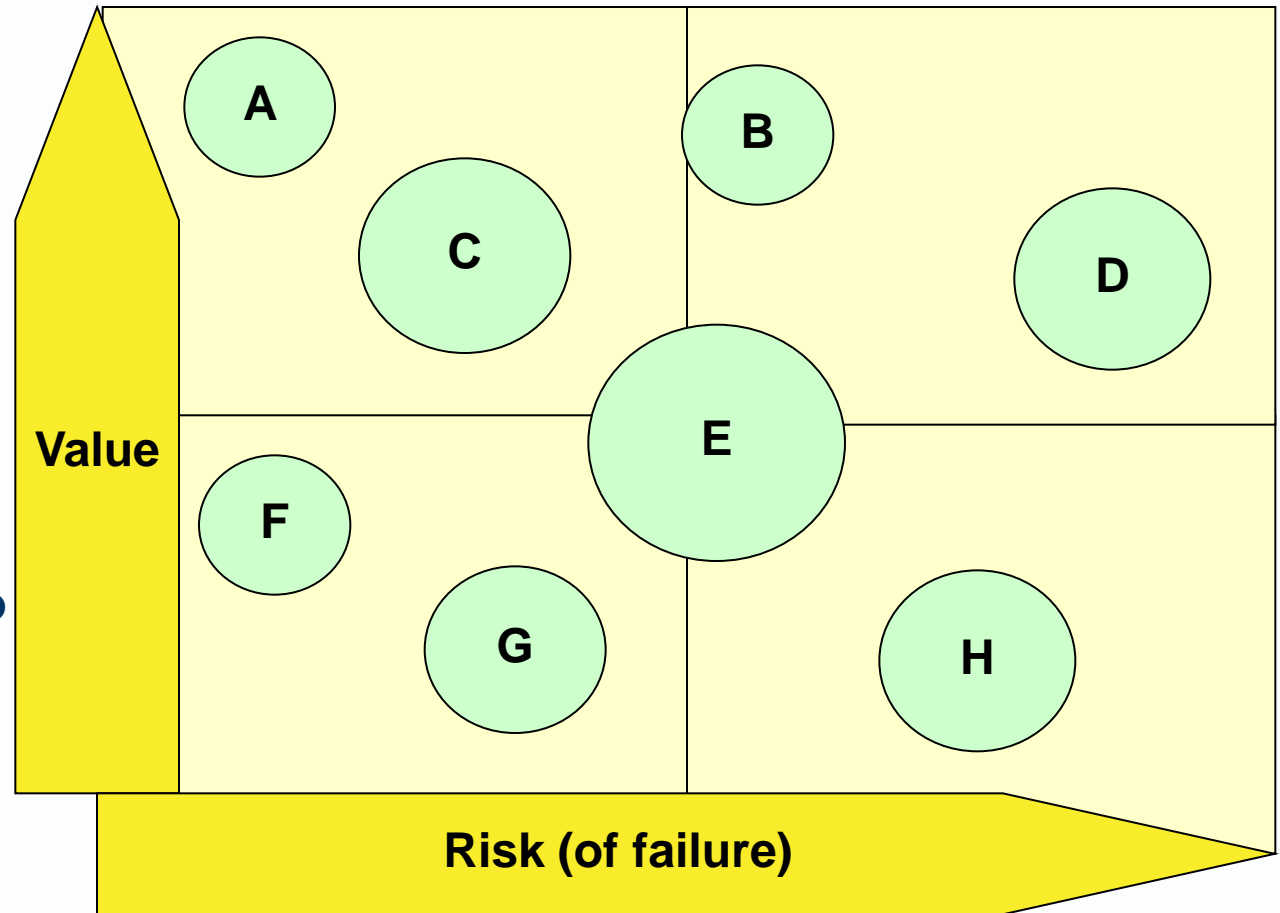
Consultant speak

Circle size = change cost

Value

A

B

C

D

E

F

G

H

Risk (of failure)
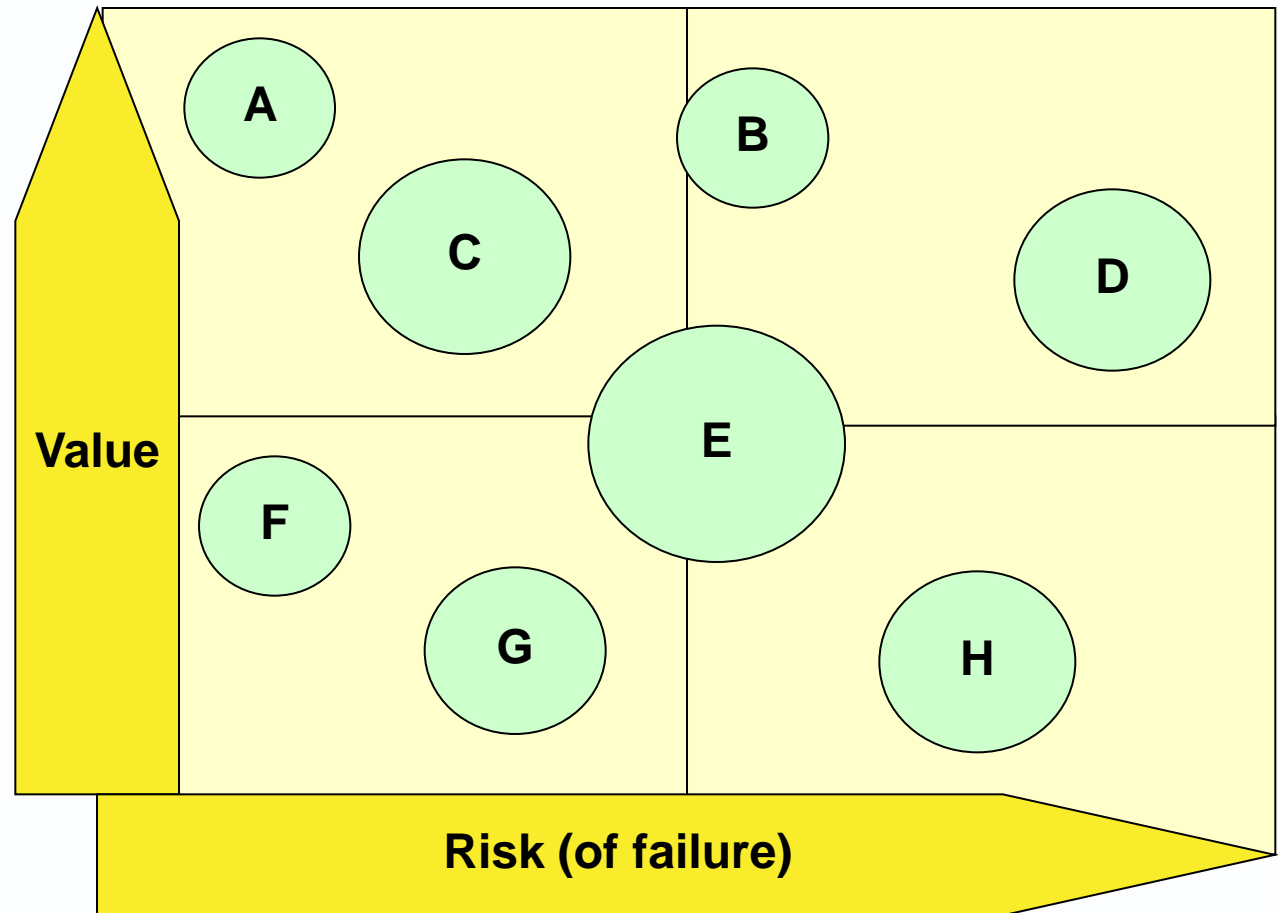
Four approaches

► **1. Value-driven**

► **2. Risk averse**

► **3. Comprise of above**

► **4. Risk-tackling**

► **To decide: What else do you want to know?**

► Circle size = change cost

Value

Risk (of failure)

A B C D E F G H

Define change characteristics

1. **Value**
2. **Cost**
3. **Risk**
4. **Dependencies**
5. **Scope**
   - Hard scope: High risk first?
   - Soft scope: High risk last?
6. **Time – duration**
7. **Time – urgency**
8. **Resources**
9. **Minimise waste**
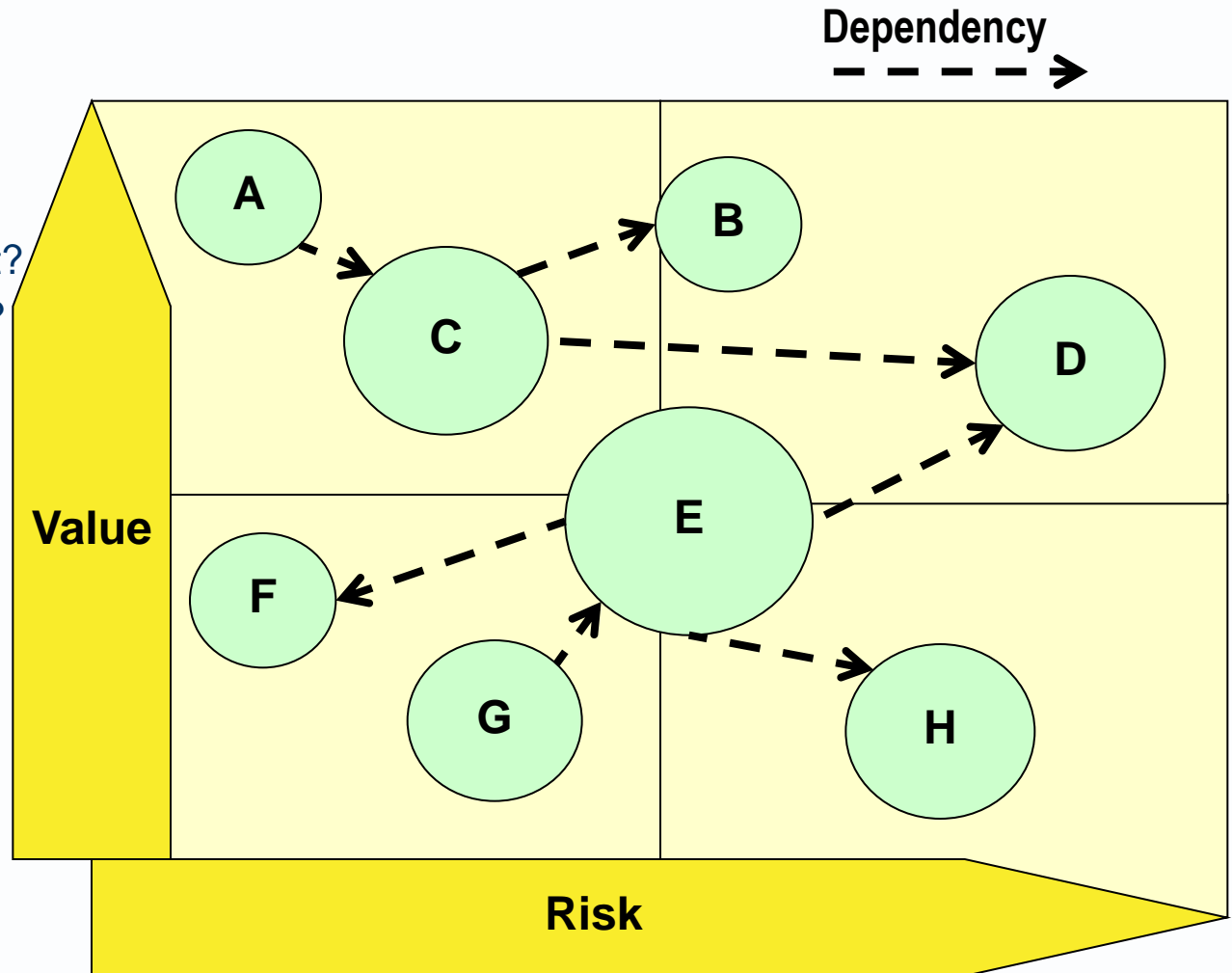
► Prioritise changes
- H/M/L or MoSCoW

► Data
- Kick off a data migration project as early as possible.
- Do data clean up before data migration
- Do data migration before replacement applications
- Follow CURD: Data entry apps before read/report-only apps

► Applications
- Use the application portfolio classification (MURDeR)
- Implement depended on apps before dependent apps
- Use the sequence of the business process or value stream?

Communicate priorities and progress clearly

► "Once IT and business unit leaders have established priorities, they must communicate them clearly to the rank and file.

► Good communication sets the proper tone and ensures that people understand how your governance processes work."

Quoted from research by Alice Dragoon
© 1994 - 2011 CXO Media Inc. a subsidiary of IDG Enterprise

Divide the transformation into stages

| **Migration path** or plan	a progressive series of architecture descriptions, each related to different state of an enterprise or system.

Migration Path ➤   **Road Map** ➤   **Programme or Project Plan** ➤

► Baseline (as is)
  ■ Current state, where the customer is now
► Target (to be)
  ■ Future state, where the customer wants to go
► Pipeline
  ■ States or milestones the customer already has in sight
► Transition states
  ■ Zero, one or intermediate stages

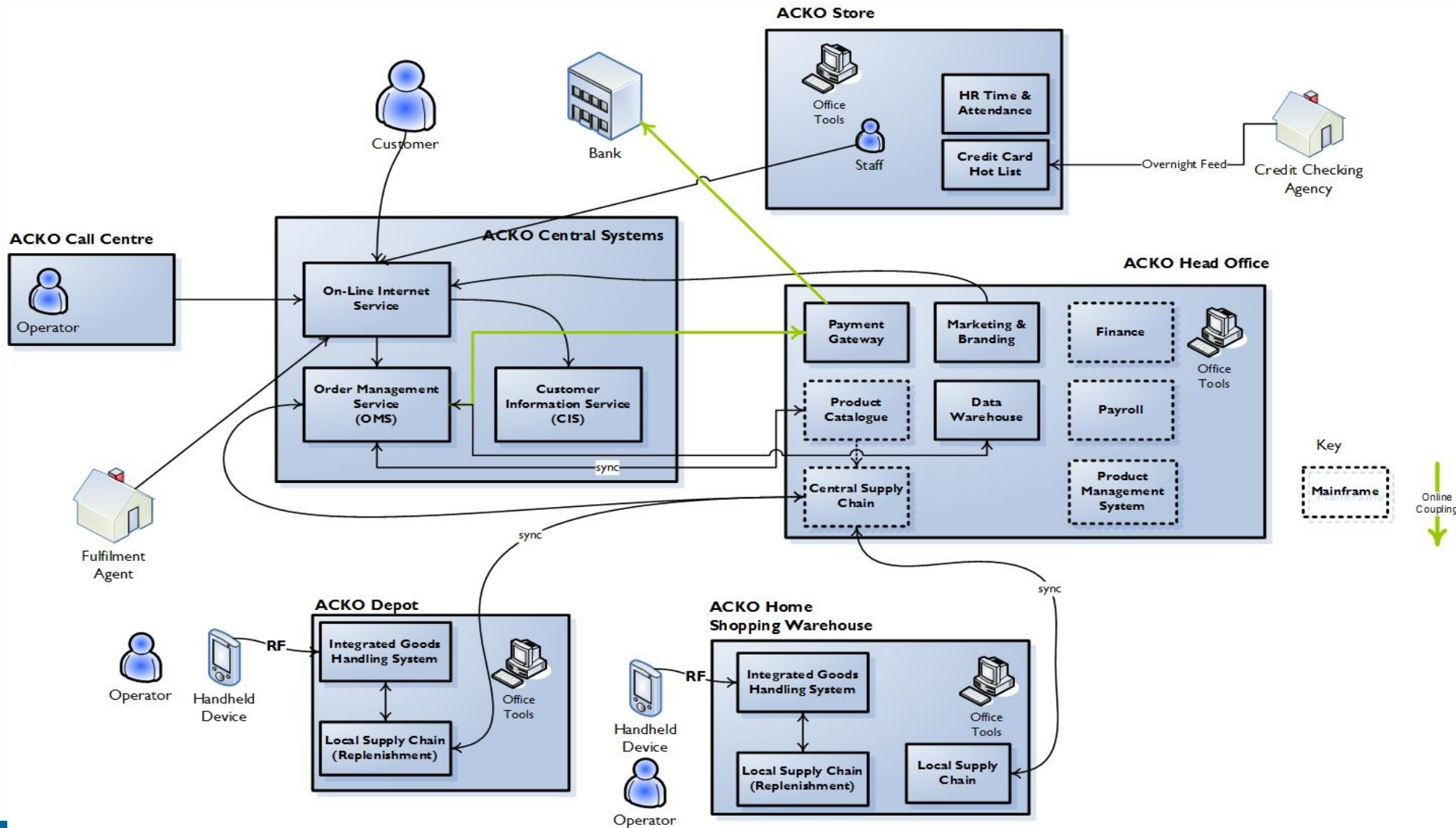# Example migration path

► This example shows a migration path that uses "static positioning" of the solution elements

► This helps to reveal and animate the migration path

Baseline state

Avancier

Avancier
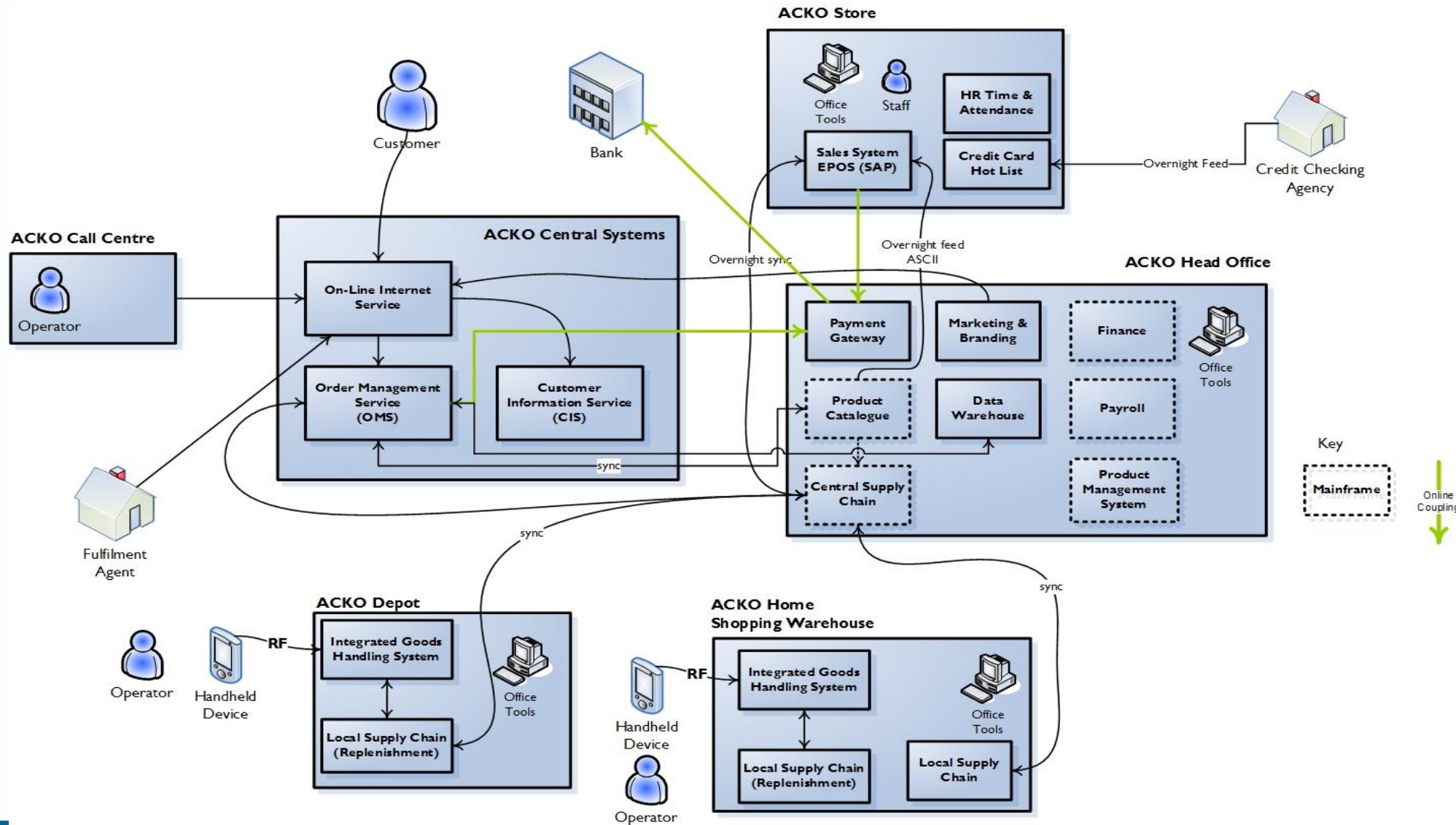
► Store the numbers of each architecture description element's first state and last state.

► **Display the architecture description at state N** by selecting only those elements which have
   ■ A first state = N or lower
   ■ A last state = N or higher

Architecture evolution table

► [an artefact] a table that shows when architectural entities are created, changed and removed through a series of transition states.

| Migration path				
Architecture entity Or solution element	**Phase 1**	**Phase 2**	**Phase 3**	**Phase 4**
A	V. 1	V. 2		
B	V. 1			
C		V. 1	V. 2	V. 3
D (temporary)		V. 1	Retire	
E			V. 1	
F			V. 1	V. 2
G				V. 1
H				V. 1

Work or product evolution table

► [an artefact] a table that shows when work units start and stop through a series of transition states.

| Work or product evolution table				
Work or product element	**Version**	**Description**	**Phase created**	**Phase retired**
A	V. 1		Phase 1	Phase 2
	V. 2		Phase 2	
B	V. 1		Phase 1	
C	V. 1		Phase 1	Phase 2
	V. 2		Phase 2	Phase 3
	V. 3		Phase 3	
D	V. 1		Phase 2	Phase
E	V. 1		Phase 3	
F	V. 1		Phase 3	Phase 4
	V. 2		Phase 4	
G	V. 1		Phase 4	
H	V. 1		Phase 4	

Transition states add complexity

► Baseline
  ■ Replace grey
  ■ Keep green

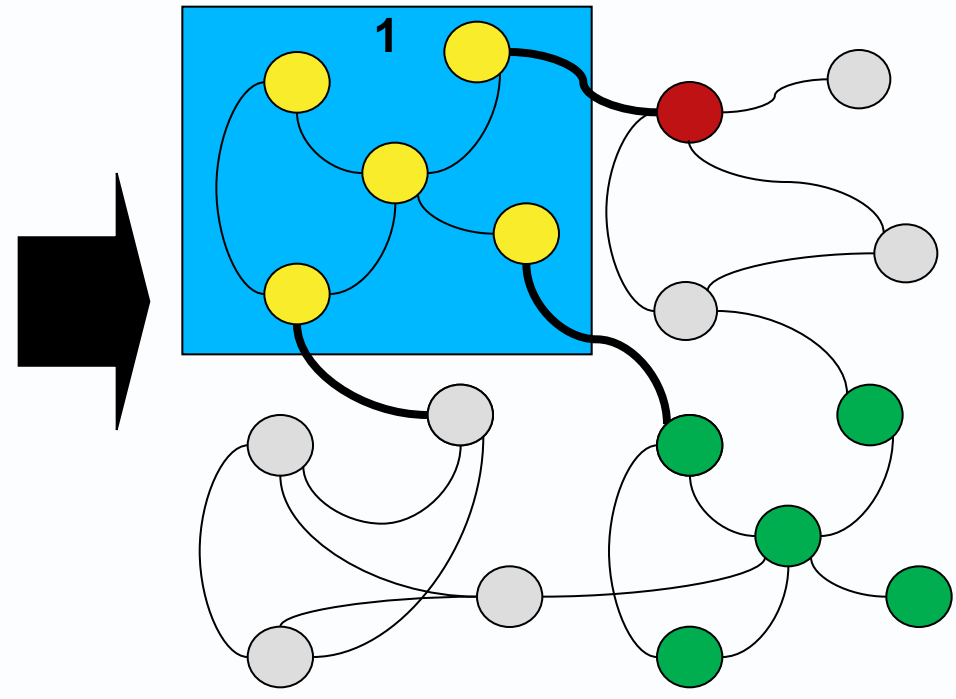► Target – with 3 transition states and retaining some baseline
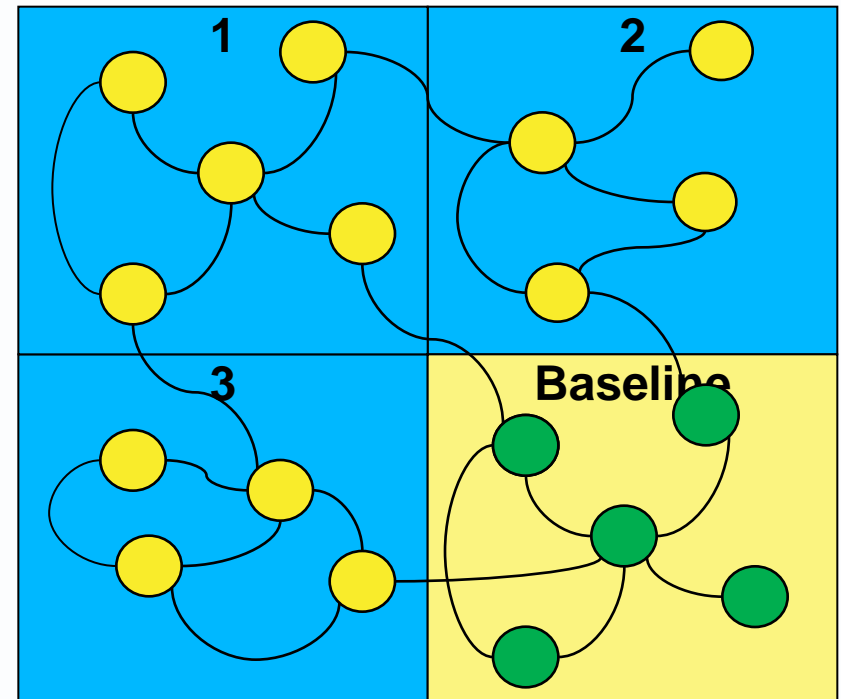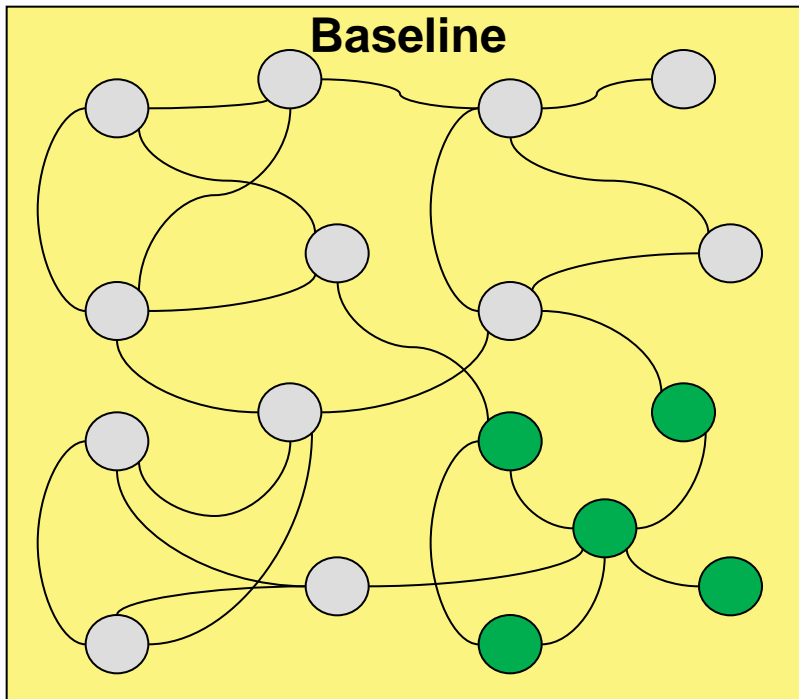
Include any intermediate or transition deliverables

► Baseline
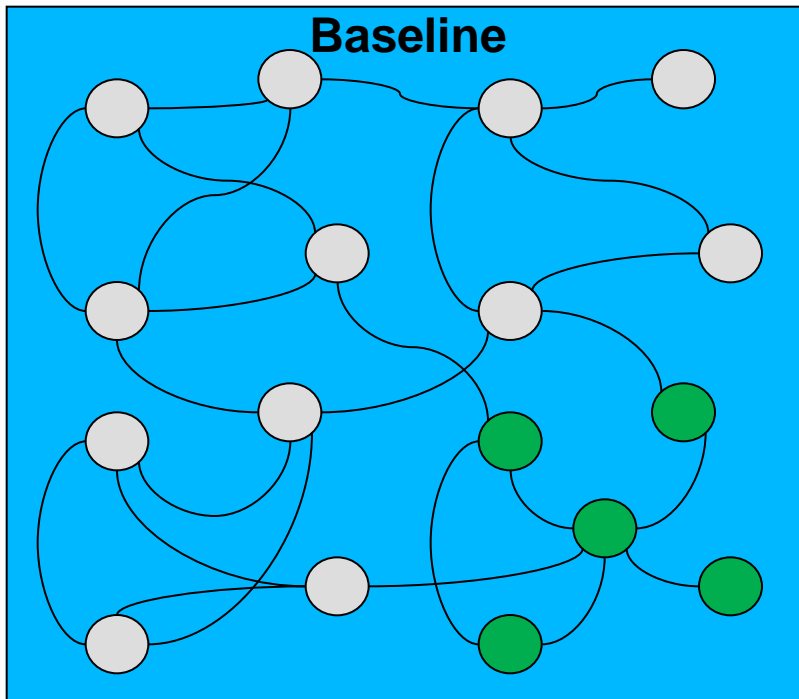
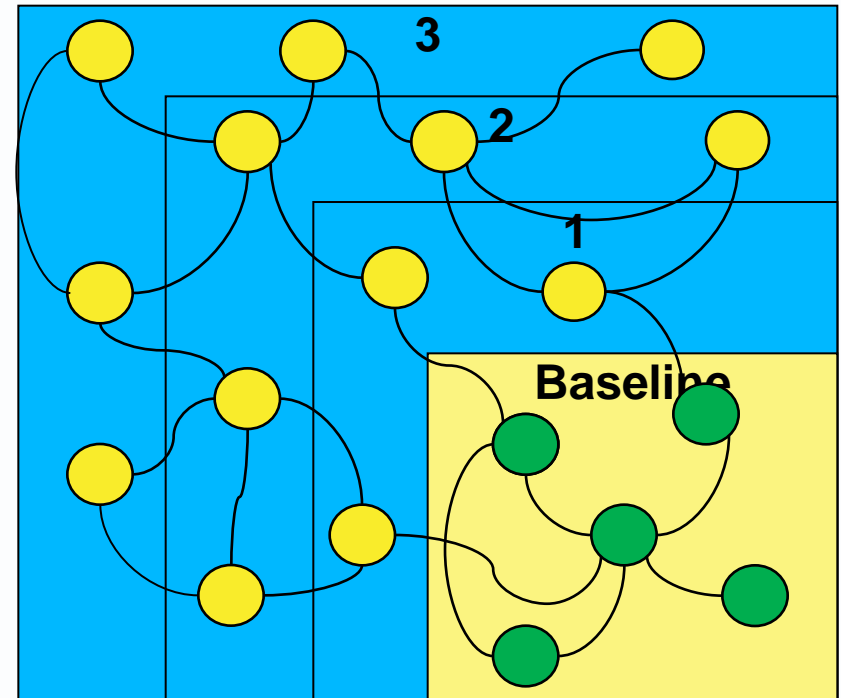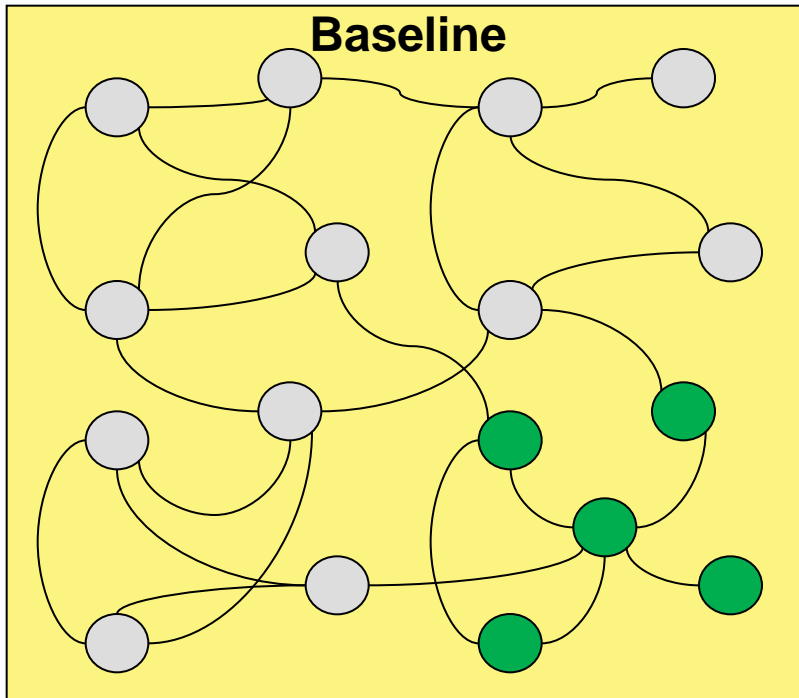► Transition state 1 will need
   ■ Temporary interface to baseline system
   ■ Permanent interface to baseline system
   ■ Interface to temporary system in scope of state 2

Minimising wasteful changes?

► Baseline

► Target – growing around the baseline – but might not work as a plan

Plot the migration path

► Divide the transformation into stages

► Assign deliverables and dates to each stage

- Include any temporary deliverables

► Define interfaces for each transition state

- Temporary interfaces to baseline systems
- Permanent interfaces to baseline systems
- Interfaces to temporary system in scope of state

► *Convince your stakeholders it is workable*

Stages	Deliverables and changes	Temporary deliverables?
Stage 1: date A	Deliverable/change Deliverable/change Deliverable/change	
Stage 2: date B	Deliverable/change Deliverable/change Deliverable/change	
Stage 3: date C	Deliverable/change Deliverable/change Deliverable/change	

Assign deliverables and dates to each stage

Stages	Deliverables and changes	Temporary deliverables?
Stage 1: date A	Deliverable/change Deliverable/change Deliverable/change	
Stage 2: date B	Deliverable/change Deliverable/change Deliverable/change	
Stage 3: date C	Deliverable/change Deliverable/change Deliverable/change	

Avancier

Plot migration path (in AM)

Initiate
- Establish capability
- Establish the context
- Scope the endeavour
- Get vision approved

Govern
- Respond to oper'l change
- Monitor the portfolio(s)
- Govern delivery
- Initiate construction

Manage
- Manage stakeholders
- Manage requirements
- Manage business case
- Manage readiness & risks

Architect
- Understand the baseline
- Review initiation products
- Clarify NFRs
- Design the target

Plan
- Select & manage suppliers
- Plot migration path
- Review business case
- Plan delivery

Later