Avancier Methods (AM)
Enterprise Architecture

Analyse and Rationalise Platform Technologies

AM level 2 processes – with an EA perspective

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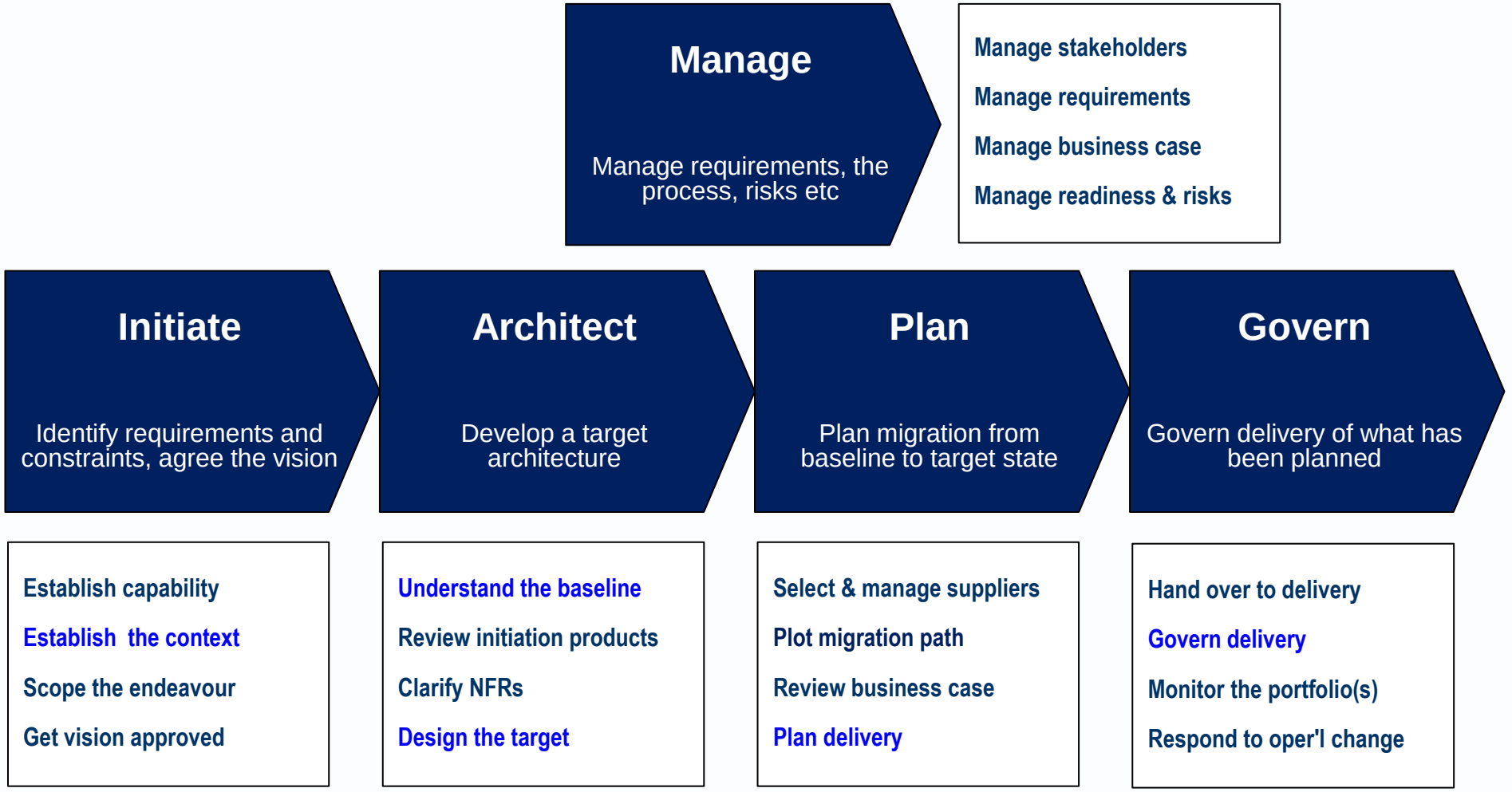
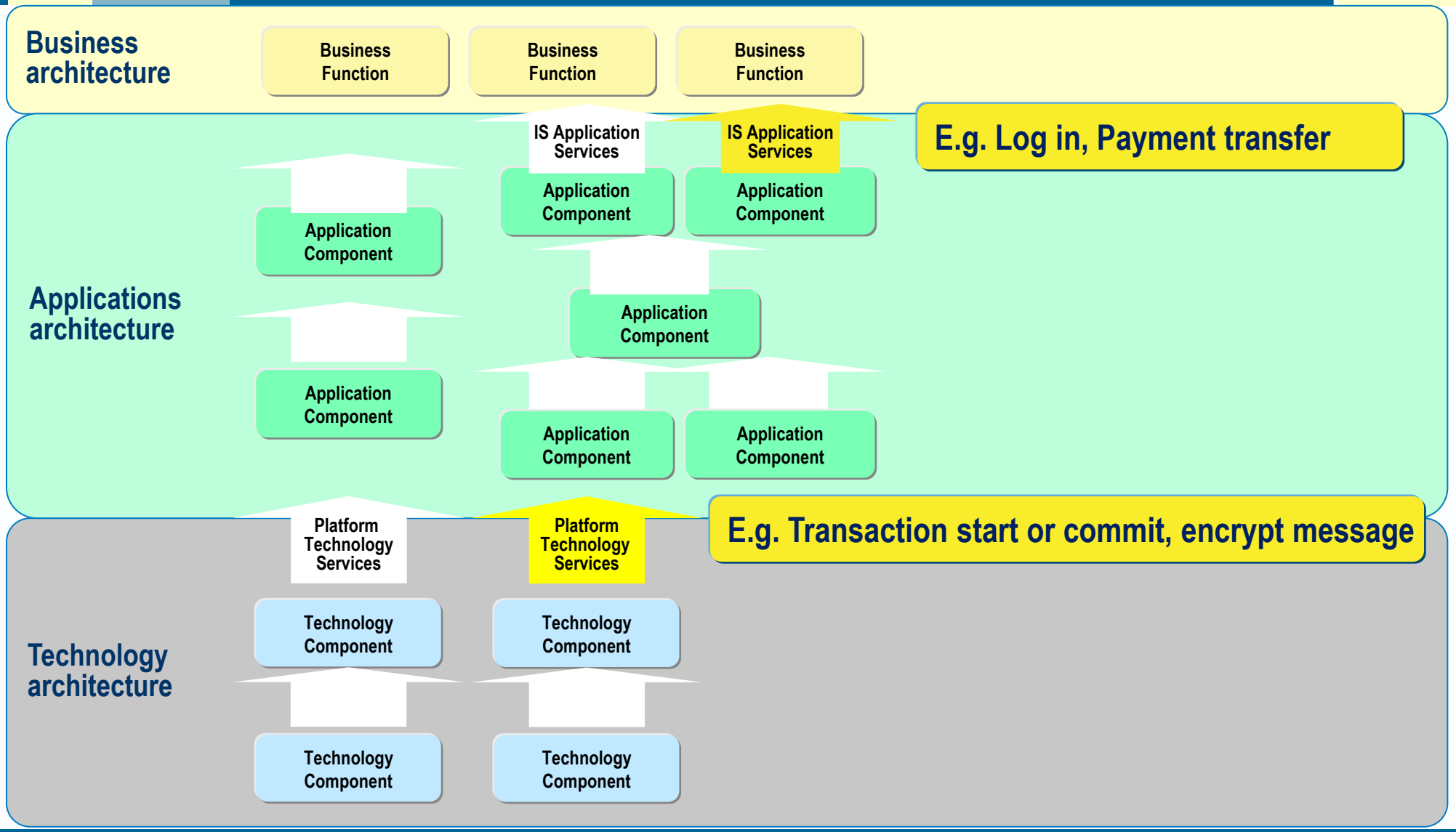


Layers architecture of components and services



Overview of the rationalisation approach

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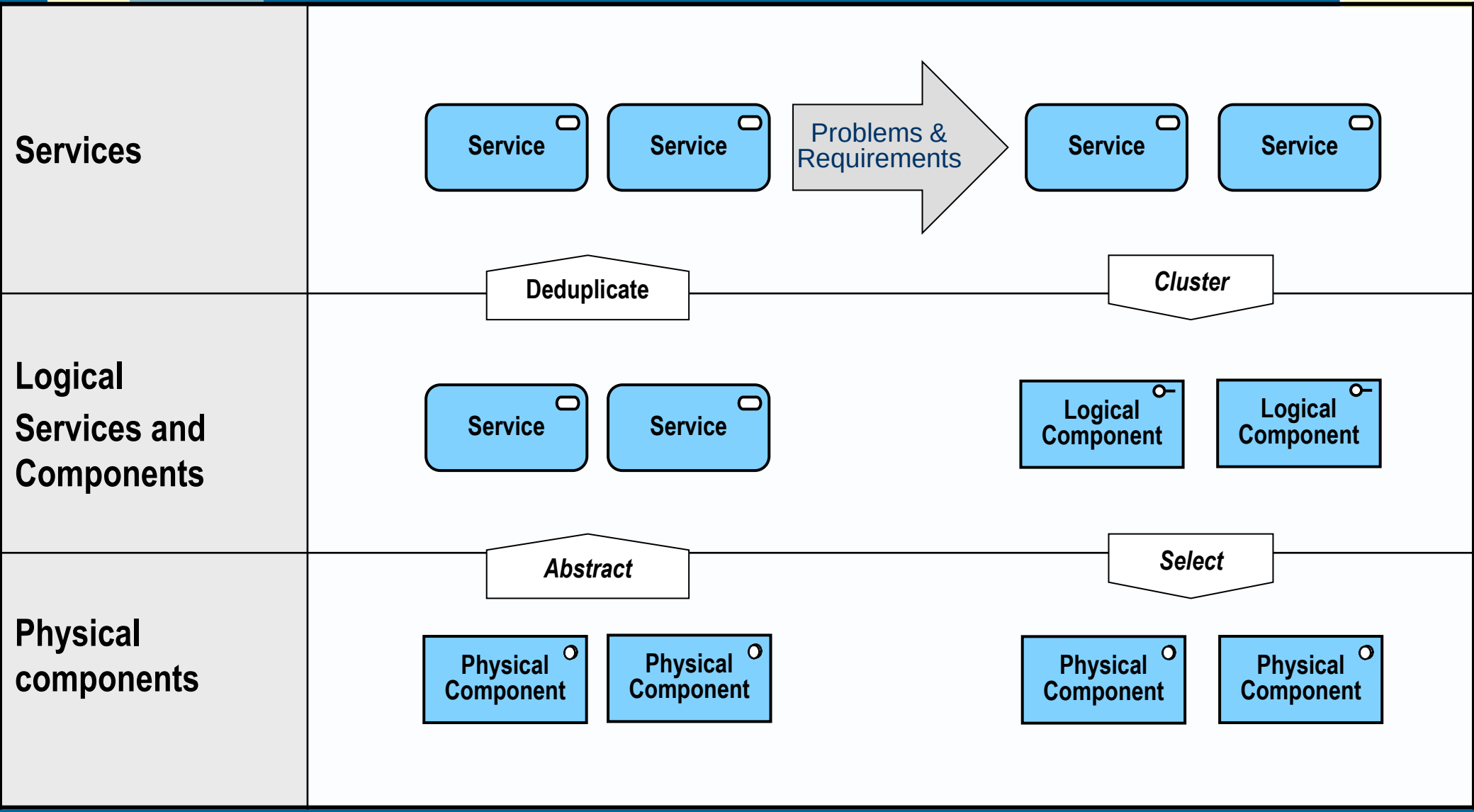
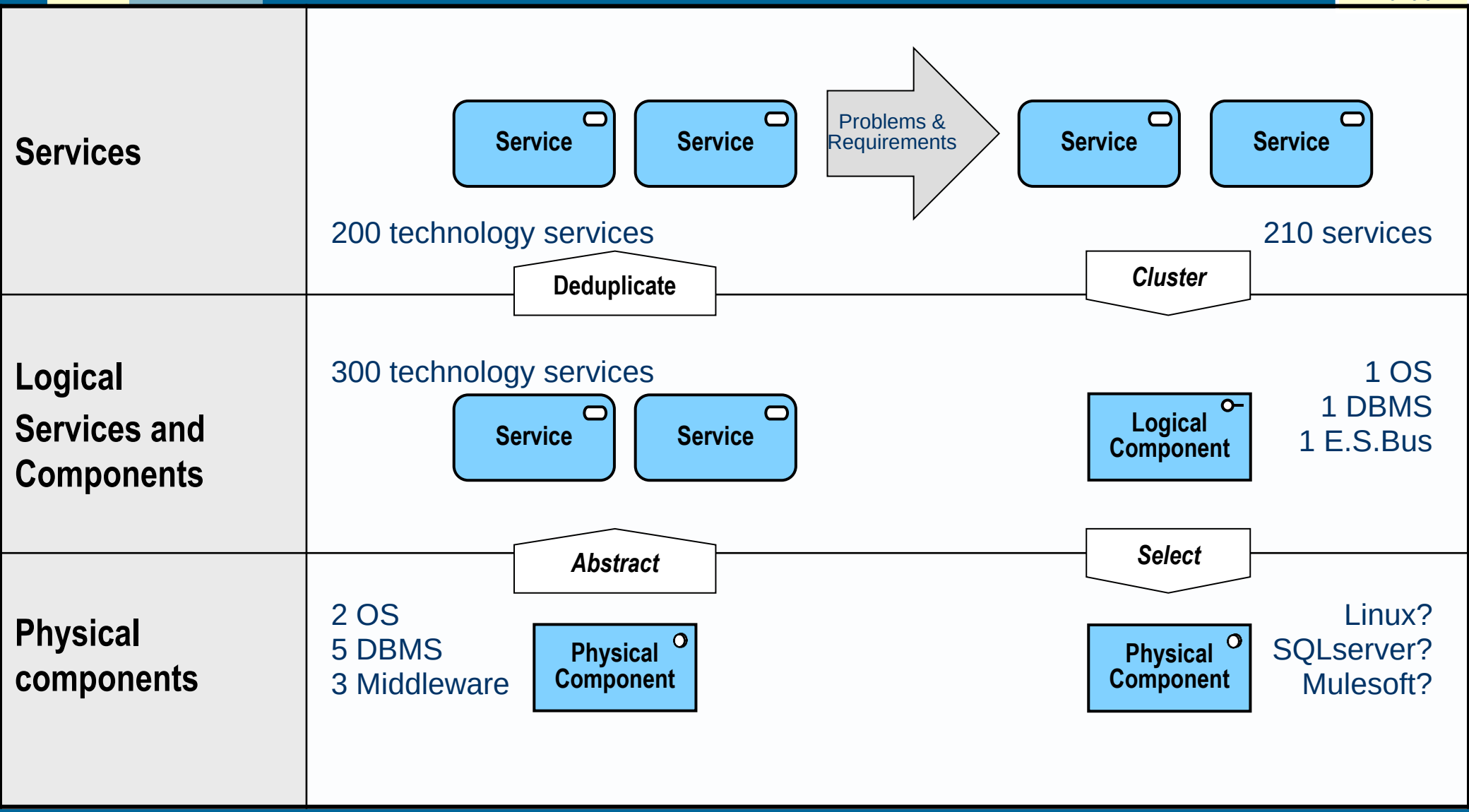


For example



Portfolio rationalization

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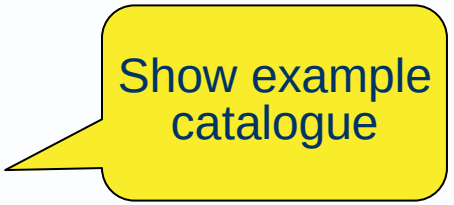
1. Identify the baseline components
2. Understand the baseline components' services
3. Evaluate baseline components
4. Review the context and motivations
5. Design the target component portfolio
6. Plan baseline-to-target migration
7. Govern delivery of the change

Identify the baseline components

- Classify baseline components under a hierarchical classification structure.
- List platform technology components under a generic classification like the **Enterprise Technology Classification** below.
  - Client devices and user access
  - Generic user applications
  - Operating systems
  - Database management
  - Messaging middleware
  - Software development
  - Servers
  - Data storage
  - Networks
  - ITSM: IT operations management
  - Environment.
  - Security



Note

Many enterprises have some kind of platform technology catalog.

Many don’t.

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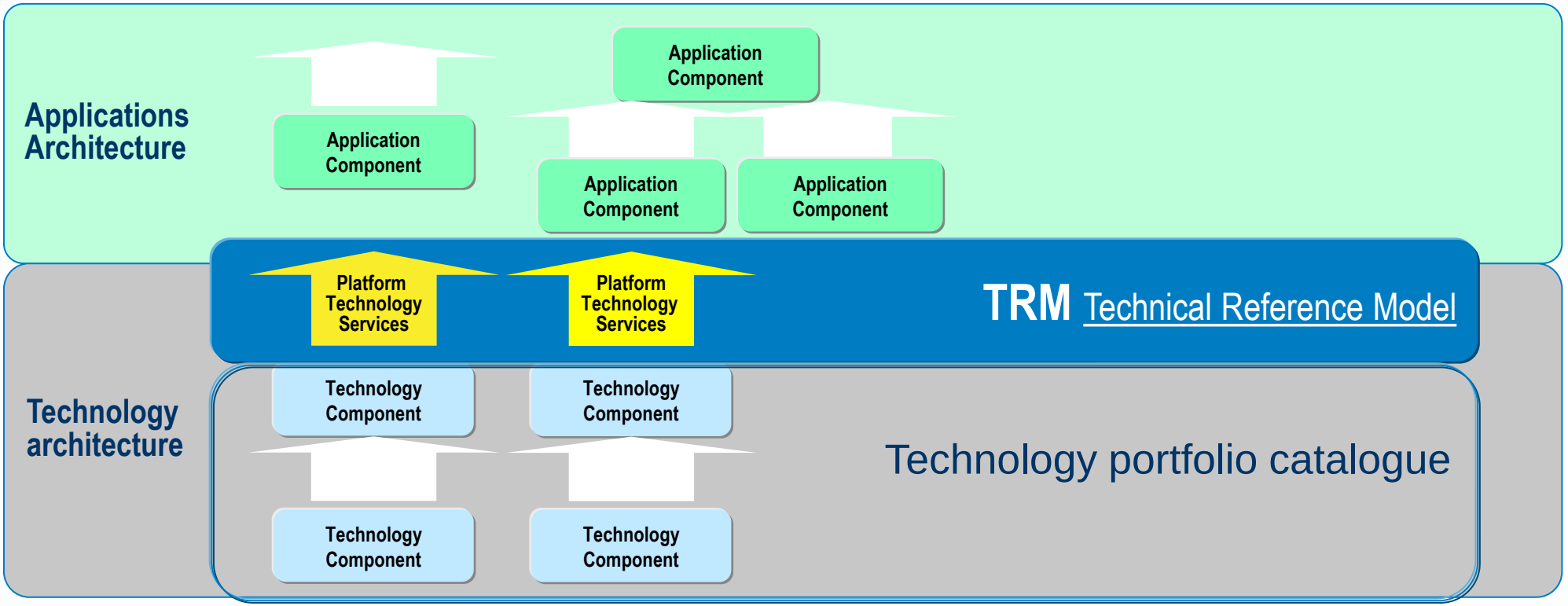
Understand the baseline components' services

- Catalog the services provided by components.
- Build a Technical Reference Model (cf. TOGAF's TRM), in which all the services provided by the enterprise's infrastructure technologies are clustered into groups under a generic classification structure.



TOGAF's Technical Reference Model (TRM) – The graphic

Application Software Categories

Application Platform Interface

Application Platform

Communications Infrastructure Interface

Qualities

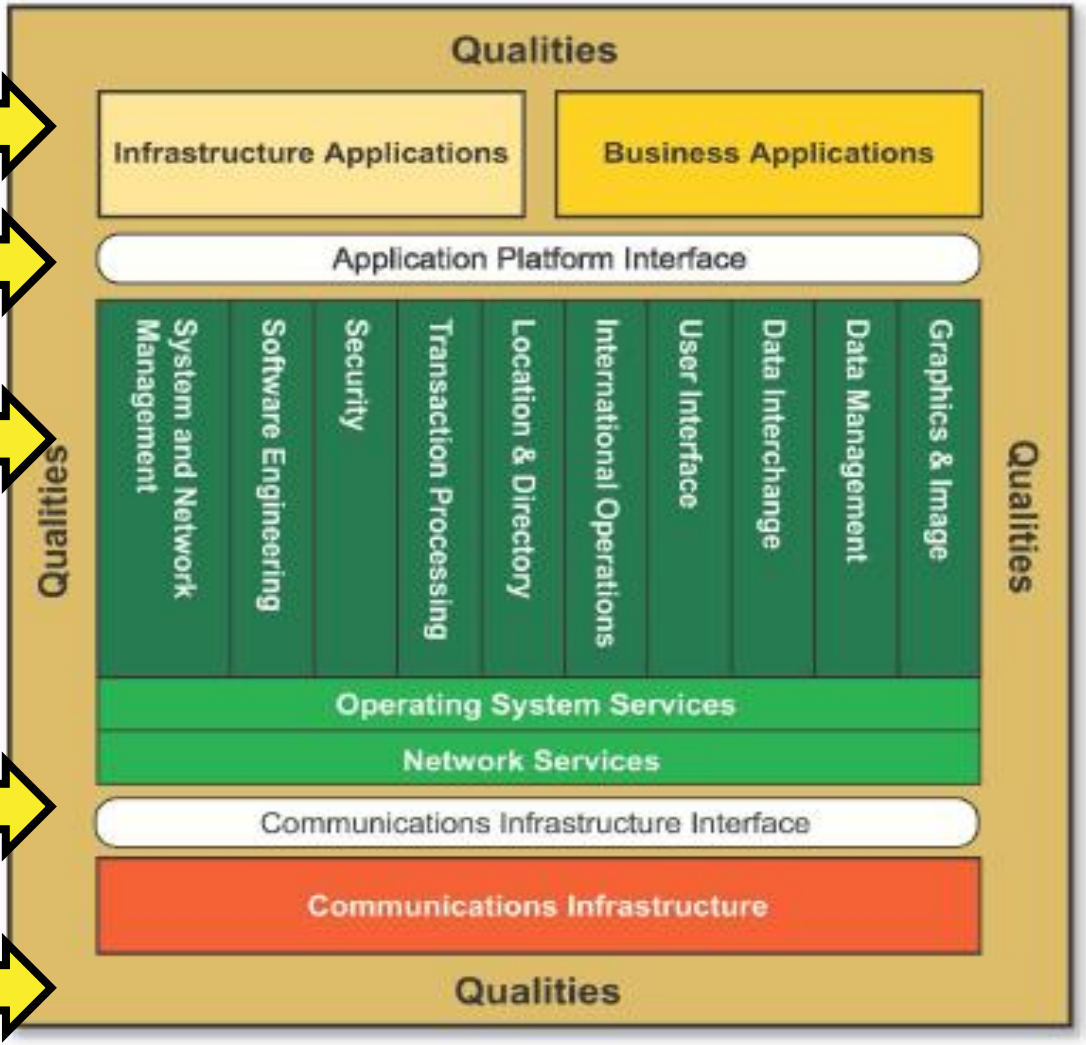


Figure 43-2 Detailed Technical Reference Model (Showing Service Categories)

TOGAF's Technical Reference Model (TRM) – The taxonomy

User Interface Services	Transaction Processing Services	Operating System Services	Software Engineering Services
Graphical Client/Server services	Starting a transaction	Kernel Operations	Programming Language services
Display Objects services	Co-ordination of recoverable resources in a transaction	Command Interpreter and Utility services	Object Code Linking services
Window Management services	Committing or rolling back transactions	Batch Processing services	CASE Environment and Tools services
Dialogue Support services	Controlling timeouts on transactions	File and Directory Synchronization	Graphical User Interface (GUI) Building services
Printing services	Chaining transactions together		Scripting Language services
Computer-Based Training and Online Help services	Monitoring transaction status		Language Binding services
Character-Based services			Run-Time Environment services
			Application Binary Interface services
Graphics and Imaging Services	**Data Management Services**	**Network Services**	**OO Provision of Services**
Graphics services	Data Dictionary/Repository services	Electronic Mail services (send, receive…)	Object Request Broker (ORB) services
Graphical Object Management services	Database Management System (DBMS) services	Distributed Data services	Implementation Repository services
Drawing services	OO Database Management System (OODBMS) services	Distributed File services	Installation and Activation services
Imaging functions	File Management services	Distributed Name services	Interface Repository services
	Query Processing functions	Distributed Time services	Replication services
International Operation Services	Screen Generation functions	Remote Process (Access) services	Common Object services
Character Sets and Data Representation services	Report Generation functions	Remote Print Spooling and Output Distribution services	Change Management services
Cultural Convention services	Networking/Concurrent Access functions	Enhanced Telephony functions	Collections services
Local Language Support services	Warehousing functions	Shared Screen functions	Concurrency Control services
		Video-Conferencing functions	Data Interchange services
		Broadcast functions	Event Management services
		Mailing List functions	Externalization services
			Licensing services
Data interchange services	**Location and Directory Services**	**System and Network Management Services**	Lifecycle services
Document Generic Data Typing and Conversion services	Directory services	User Management services	Naming services
Graphics Data Interchange services	Special-Purpose Naming services	Configuration Management (CM) services	Persistent Object services
Specialized Data Interchange services	Service Location services	Performance Management services	Properties services
Electronic Data Interchange services	Registration services	Availability and Fault Management services	Query services
Fax services	Filtering services	Accounting Management services	Relationship services
Raw Graphics Interface functions	Accounting services	Security Management services	Security services
Text Processing functions		Print Management services	Start-Up services
Document Processing functions	**Security Services**	Network Management services	Time services
Publishing functions	System Entry Control services	Backup and Restore services	Trading services
Video Processing functions	Security Management services	Online Disk Management services	
Audio Processing functions	Audit services	License Management services	
Media Synchronization functions	Access Control services	Capacity Management services	
Multimedia Processing functions	Non-Repudiation services	Software Installation services	
Information Presentation and Distribution functions	Trusted Recovery services	Trouble Ticketing services	
Hypertext functions	Encryption services		

Note

It seems few enterprises analyze to components to that level of detail.

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Evaluate baseline components

- *Business fitness*, considering
  - Usage
  - Benefit
  - Cost

- *Technological fitness*. considering
  - Supportability,
  - Technical debt
  - Compliance to standards.

Review technology support and compliance

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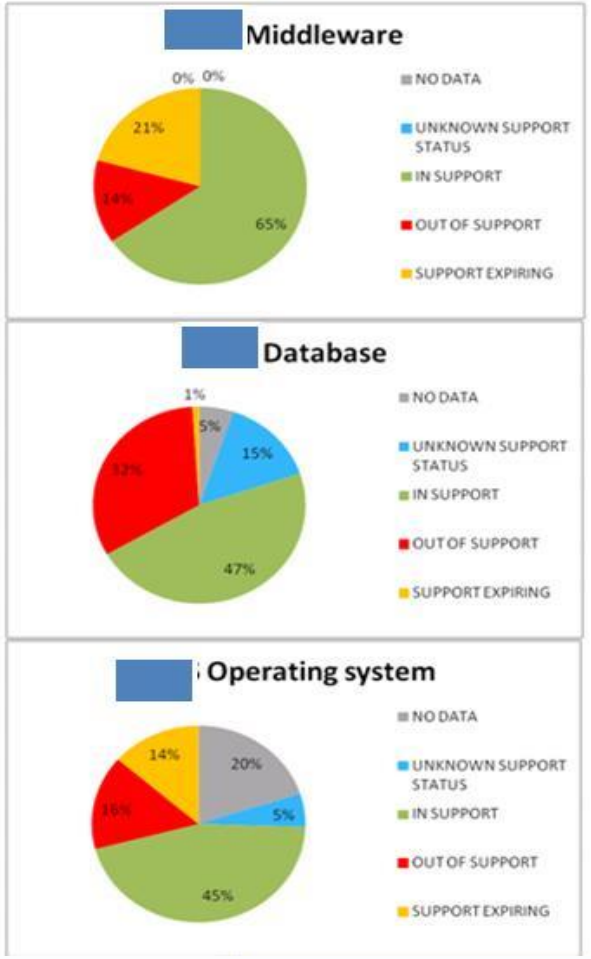
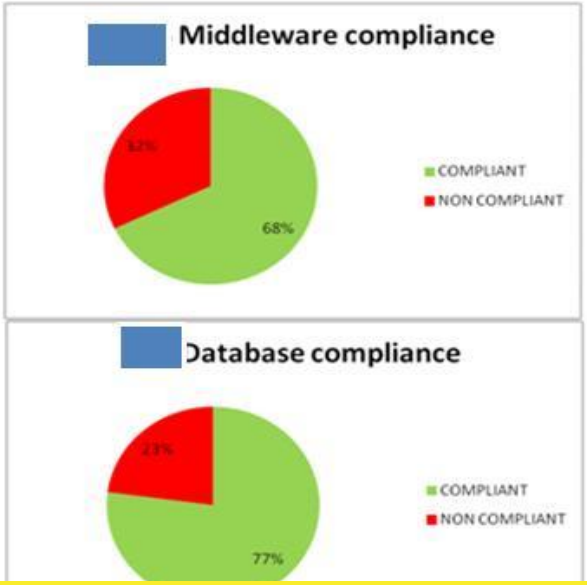
- Out of support and non-compliant technology products present business risk and increased cost to run, e.g.:
  - exposure to data security issues
  - system reliability and robustness
  - higher labour costs for niche product support
  - expensive extended licence support costs





1. Understand the baseline
   - Classify and catalog baseline technologies
   - Classify and catalog baseline technology services
2. Review the context
3. Design the target
   - Define target technology services
   - Define target technology components
4. Plan baseline-to-target migration
5. Govern delivery of the change.

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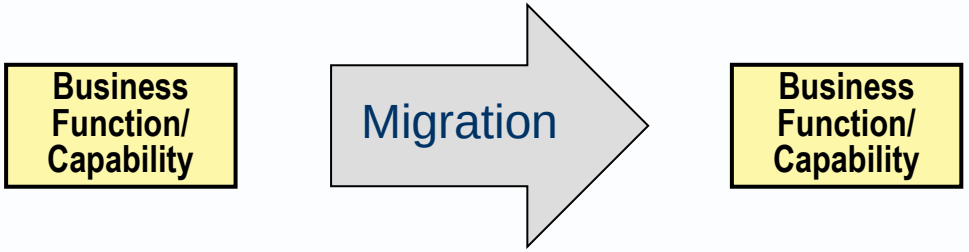
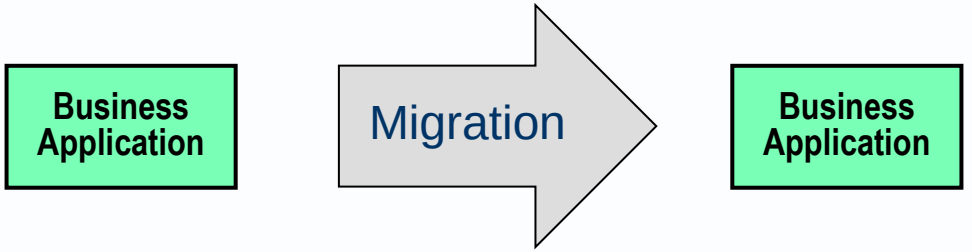
Review the context and motivations



Review any higher-level business change road map and other drivers for application change.



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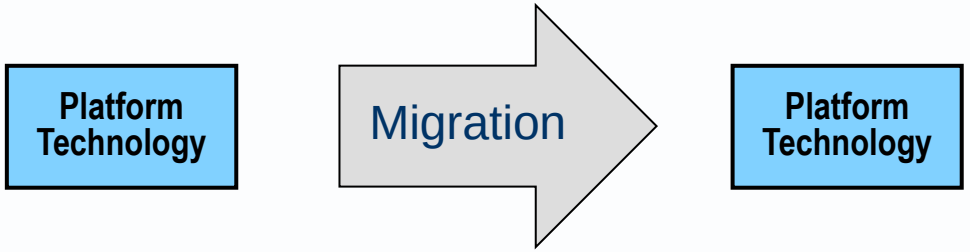

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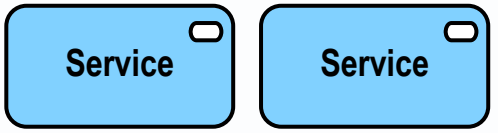
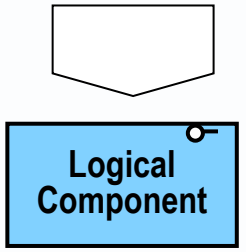
Design the target component portfolio

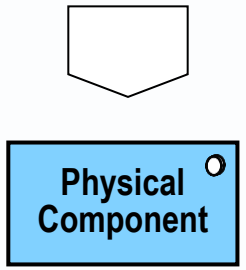
- *To rationalize* components*:*
  - list and deduplicate services they provide, and
  - refine in the light of the context and motivations.



- Define target techcnologycomponents by clustering cohesive groups of required services,
- Mindful of what is available in the market place by way of generic techcnologycomponents.



- Identify procurable components
- Select and procure components



Enterprise architecture transformation

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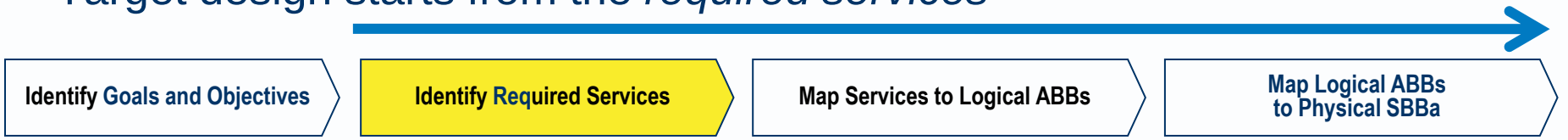
Baseline analysis abstracts *performed services* from building blocks

Target design starts from the *required services*



Business	Define Business Services	Map Services to Functions	Map Functions to Organization Units
Data	Define Data Entities	Map Data Entities to Logical Data Components	Map Logical Data Components to Physical ones
Apps	Define IS Services	Map Services to Logical App Components	Map Logical App Components to Physical ones
Technology	Define Technology Services	Map Services to Logical Technology Components	Map Logical Tech Components to Physical ones

To change techcnology components*:*

define the vision for each component, that is, the end state to be reached after (say) 3 years.

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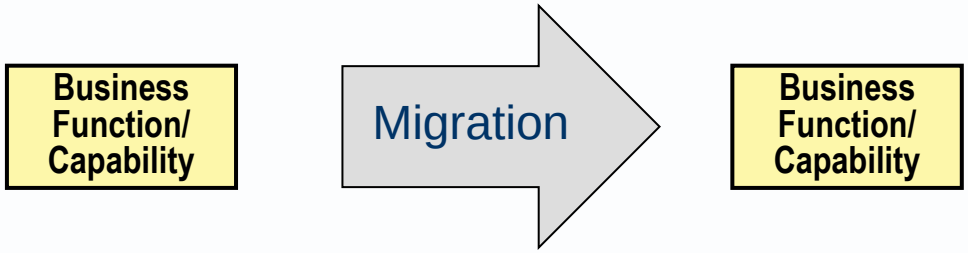
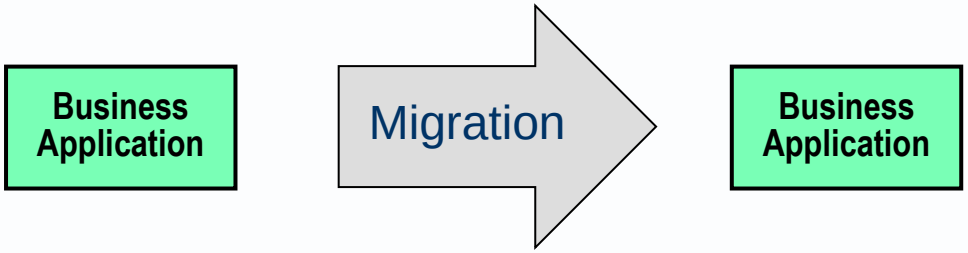
Plan baseline-to-target migration path



Align application changes with business changes.



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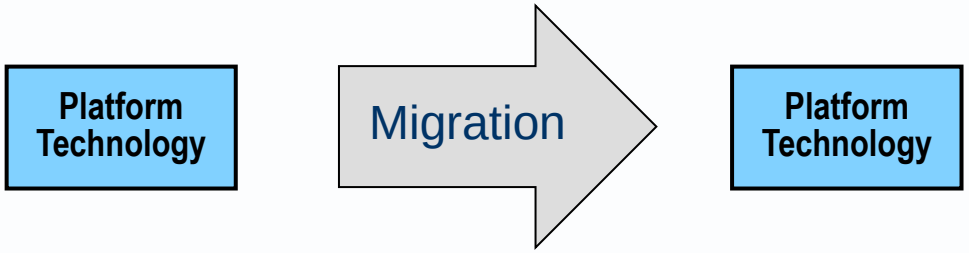

Define road maps

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Define a road map for changing components to reach the target

App	Year	Year + 1	Year + 2	Year + 3
ERP 1	Ignore	Ignore	Remove	
ERP 2			Deploy	Improve
CRM 1	Remove			
CRM 2	Deploy	Improve	Prize	Prize
Billing	Prize	Prize	Prize	Prize
DW/BI	Improve	Improve	Improve	Improve
Timesheet	Ignore	Rewrite	Prize	Prize

Tech Category	TAF Product	2010				2011				2012				2013			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
"Application Servers"	"Application Servers"																
	RedHat x.y		S														
	Tomcat		S														
	WebLogic App Server 10.x	S															
	WebLogic App Server 9.x	S							C								R
	WebLogic App Server 8.x	C						R									

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Govern delivery of the change

Finally (the most difficult step), govern delivery of the changes set out in business, application and technology change road maps.

However you do it

- This is a convoluted process that involves juggling:
  - The requirements of old and new business applications
  - Baseline technologies that cannot be changed
  - Overarching IT principles and strategies
  - Time, cost and resource constraints on change
- Also
  - Generic platform services available from technologies in the market place, defined in existing APIs
- Where real technologies provide different services from your logical candidate technologies, then things get messy

A bit of fun

- In September 2015, the Operating Systems deployed on devices used by members of the public to visit the Avancier web site were listed in order of popularity
- Which do you think the two most popular OS names were?
  - Android
  - iPhone
  - Linux
  - Mac OS X
  - Unix
  - Windows 7
  - Windows 8
  - Windows NT
  - Windows XP
  - Other?

Operating system visits – w/c 01/09/2015

- Windows 7 16 %
- iPhone 13 %

- Windows NT 6 %
- Linux 5 %
- Mac OS X 4 %
- Windows XP 3 %

- Android 1 %
- Windows 8 0.4%

- Other

- And in January 2019? What has changed?

	19/12/2018 - 17/01/2019	
OPERATING SYSTEM VERSION	IMPRESSIONS	PERCENT
Could not be identified	3,715	27.19%
iOS	3,386	24.78%
Windows 7	1,628	11.91%
iOS 11	1,251	9.15%
OS X	1,203	8.80%
Windows 10	860	6.29%
Linux	716	5.24%
macOS 10.13 High Sierra	399	2.92%
iOS 10	293	2.14%
Android 8.0 Oreo	-	-
Android 5.0 lollipop	-	-
Windows XP	136	1.00%
Linux (Ubuntu)	79	0.58%
Total	**13,666**	**100.01%**