Certificate
in
Business Service Architecture

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Introduction

This syllabus presents the learning objectives to be assessed for the A4Q Certificate in Business Service Architecture. This Certificate assesses a candidate's ability to demonstrate an understanding of Business Service Architecture and the relevant principles, concepts, and techniques.

Assessment Examination

The examination leading to the Certificate in Business Service Architecture is based upon this syllabus and the A4Q Business Service Architecture course materials. Candidates' knowledge and understanding of Business Service Architecture are assessed in line with the learning objectives specified in this syllabus.

The examination leading to the Certificate in Business Service Architecture:

- Consists of 40 multiple-choice questions, each of which has a value of one mark. Candidates must gain 26 marks out of the available 40 marks (65%) in order to pass the examination and be awarded the certification.
- Has a duration of 60 minutes. If a candidate's first language is not the examination language, the candidate is allowed an additional 25% (15 minutes) of examination time.
- It is a closed-book examination, and no reference materials may be used while sitting the examination.
- Assesses competence at levels 1,2, and 3 of Bloom's Taxonomy of Cognitive Domains. These levels assess competence as follows:
    - K1: remember
    - K2: understand
    - K3: apply

Question weighting for each syllabus section

Syllabus area	Percentage weighting	Target number of questions
1. The Enterprise ecosystem	10%	4
2. Elements of a Service Architecture	10%	4
3. Activity Analysis and Modelling	20%	8
4. Capability Analysis and Modelling	20%	8
5. Ecosystem Analysis and Modelling	20%	8
6. Service Performance Frameworks	10%	4
7. Service Improvement and Maintenance	10%	4
Totals	100%	40

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Syllabus

1. The Enterprise Ecosystem (10%)

Learning objectives for the Enterprise Ecosystem

1.1. Explain the enterprise ecosystem

1.1.1. The concept of an ecosystem

1.1.2. The concept of a service system

1.1.3. Ecosystem ownership and accountability

1.2. Describe the service ecosystem

1.2.1. The concept of the service ecosystem

1.2.2. Service system roles and responsibilities

1.3. Describe the concept of service-oriented business architecture

1.3.1. Service-oriented business architecture

1.3.2. Macro services

1.3.3. Micro services

2. Elements of a Service Architecture (10%)

Learning objectives for the Elements of a Service Architecture

2.1. Establish the service requirements: business outcomes; customer experience; technical constraints; utility; service quality

2.2. Analyse and define key service architecture elements:

2.2.1. The vision and mission

2.2.2. The service stakeholders

2.2.3. The title and value proposition for a service

2.3. Identify the service architecture blueprints:

2.3.1. Ecosystem diagram

2.3.2. Business capability model

2.3.3. Activity models

3. Activity Analysis and Modelling (20%)

Learning objectives for Activity Analysis and Modelling

3.1. Model and analyse the service activities:

3.1.1. Value stream diagram

3.1.2. SIPOC

3.1.3. Business activity model

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3.1.4. Business use case diagram

3.1.5. Service blueprint

3.1.6. Ecosystem information flow diagram

3.2. Apply the gaps model of service design

3.2.1. Gap 1: The analysis gap

3.2.2. Gap 2: The design gap

3.2.3. Gap 3: The delivery gap

3.2.4. Gap 4: The service communication gap

3.2.5. Gap 5: The service perception gap

4. Capability Analysis and Modelling (20%)

Learning objectives for Capability Analysis and Modelling

4.1. Define the concept of a 'capability'

4.2. Build a capability model

4.2.1. Business capability model strata

4.2.2. Business capability taxonomy

4.3. Identify the components required to establish a capability:

4.3.1. Skilled personnel

4.3.2. Facilities and equipment

4.3.3. Processes, routines and standards

4.3.4. Authority

4.3.5. Information

4.4. Explain the link between capabilities and service activities

5. Ecosystem Analysis and Modelling (20%)

Learning objectives for Ecosystem Analysis and Modelling

5.1. Explain key ecosystem analysis concepts

5.1.1. The concept of 'modularity'

5.1.2. The concept of 'loose coupling'

5.1.3. The concept of 'tight cohesion'

5.1.4. The concept of 'contestability'

5.2. Model the ecosystem levels

5.2.1. The enterprise ecosystem

5.2.2. The service ecosystem

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5.3. Explain ecosystem linkages

5.3.1. The link between capabilities and ecosystems

5.3.2. Service Level Agreements

5.3.3. The term ‘service integration’

5.3.4. The term ‘service interface’

6. Service Performance Frameworks (10%)

Learning objectives for Service Performance

6.1. Identify and explain key service performance measurement frameworks:

6.1.1. Balanced Scorecard

6.1.2. Net Promoter Score

6.1.3. Customer Effort Score

6.1.4. Servqual

6.2. Explain the link between service performance measures and the service value proposition

7. Service Improvement and Maintenance (10%)

Learning objectives for Service Improvement and Maintenance

7.1. Explain service improvement approaches:

7.1.1. Current and target service architectures

7.1.2. CALM model

7.1.3. Linear and evolutionary approaches

7.2. Identify the drivers for ecosystem change

7.2.1. PESTLE elements

7.2.2. 5-forces

7.2.3. Service system changes

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Business Service Architecture Concepts, Approaches and Techniques

This section of the syllabus defines the key concepts, approaches, and techniques within the learning objectives in this syllabus.

Syllabus section 1: The Enterprise Ecosystem

LO 1.1 Explain the enterprise ecosystem

The concept of an ecosystem	A system where service systems at an organisational, departmental, or functional level, integrate resources to deliver service and facilitate value cocreation. The service systems are connected by agreed working arrangements and apply the rules associated with each organisation.
The concept of a service system	A system where actors collaborate and integrate resources to deliver service, offer value, and enable value co-creation.
Ecosystem ownership and accountability	There are different levels of ownership within an ecosystem: the entire ecosystem; the work of an internal service system; the relationship and service provision offered by an external service system. Accountability must be established for the entire ecosystem and its component elements.

LO 1.2 Describe the service ecosystem

The concept of the service ecoystem	A service ecosystem concerns a network of service systems, typically containing a central actor, that collaborate to deliver a defined service by integrating resources and deliverables, and facilitating value co-creation through service exchange. *A service ecosystem* is defined as a "relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange" (Vargo & Lusch, 2016, p. 161).
Service system roles and responsibilities	The service owner is accountable for: - Development and execution of the service strategy and value proposition - Communication of changes to the service - Negotiation and monitoring Service Level Agreements (SLAs) - Co-ordination of service system tasks, actor(s) and other resources - Service delivery in collaboration with identified actors who are responsible for conducting defined tasks Where service system roles and responsibilities are not clear, the following problems can occur: • **Increased neglect:** Work conducted by the service system may be neglected or poorly executed due to a lack of ownership and accountability. • **Increased uncertainty:** Uncertainty regarding the service roles, responsibilities and processes may cause the following issues: ○ Customers of the service system may struggle to access the service and achieve the desired outcomes.

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	○ Actor(s) within the service system may struggle to execute the service effectively. • **Increased inefficiency:** Work may be delayed, duplicated, or discarded due to an absence of co-ordination of service system actor(s) and other resources. • **Increased blame:** Service system actor(s) may blame other actor(s) for service system failures or mistakes, resulting in reduced trust, collaboration and continuous improvement. • **Increased task focus:** Where the actor(s) within the service system feel unempowered or are unable to influence outcomes, an increased focus on the completion of individual tasks may result. Task completion may be prioritised over the achievement of service outcomes and the service value proposition.

LO 1.3 Describe the concept of service-orientated business architecture

Service-orientated business architecture	A service-oriented business architecture comprises a set of blueprints that enable a shared understanding of the organisational components required to deliver a service.
Macro services	Macro level services are formed from aggregating a set of micro services to enable a composite service provision.
Micro services	Micro level services are unique elements that offer a distinct service provision typically at a transactional level.

Syllabus section 2: Elements of a Service Architecture

LO 2.1 Explain the enterprise ecosystem

Establish the service requirements	Each service offering should align with and fulfil a set of business requirements. These requirements encompass the following aspects: • The business outcome to be achieved by delivering a service. • The business constraints imposed by the legal/regulatory requirements and organisational policies. • The customer experience to be delivered throughout the customer journey for the service. • The technical constraints imposed by the organisation's technology polices and infrastructure. • The utility to be provided to customers by the service. • The service quality requirements (see LO 6.1.4 – Servqual)

LO 2.2 Analyse and define key service architecture elements

The vision and mission	**Vision**: The aspirational target state for the organisation or service. The target state should be realised through the accomplishment of the 'mission'. **Mission**: A statement setting out what an organisation does or aims to do to achieve the vision.
The service stakeholders	Every individual or organisational entity that has an interest in the service. The Stakeholder Wheel (Paul and Cadle, 2020) identifies the following stakeholder categories:

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	• Partners • Suppliers • Regulators • Employees • Managers • Owners • Competitors • Customers
The title and value proposition for a service	The title is the name used to identify the service. A value proposition for a service: • Clarifies the beneficial outcomes that an organisation offers from delivering the service. • Demonstrates to customers that the organisation's service offers what they desire or need. • Differentiates the organisation's service from the services offered by competitors. A value proposition states the level of service offered to customers so helps customers to clarify the service elements they require and to select between supplier organisations. Kaplan and Norton (1996), the architects of the Balanced Scorecard, identified the key attributes required to form a value proposition. These are the attributes that increase customer satisfaction, and aid customer acquisition and retention. The value proposition elements identified by Kaplan and Norton are: • **Functionality**: the features offered by the product or service. • **Price**: the amount charged for the product or service. • **Quality**: the performance standards such as robustness, accuracy and speed that are offered by the product or service. • **Choice**: the potential selection, customisation and personalisation of the product or service. • **Availability**: the level of responsiveness provided when dealing with customer requests or queries. • The **image or brand** of the organisation and its perception by customers, which may increase the customers' desire to engage with an organisation. • The **relationships** between the organisation and its customers. This relates directly to the experience offered by an organisation (and encountered by customers) throughout the entire customer journey. These attributes are grouped into three categories: **Suitability** attributes: Functionality; Price; Quality. **Convenience** attributes: Choice; Availability. **Personal affinity**: Image/Brand; Relationships.

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LO 2.3 Identify the service architecture blueprints

Ecosystem diagram	An ecosystem diagram represents the network of service systems, both internal and external to the organisation, that interact and engage with the organisation to deliver products and services.
Business capability model	A business capability model is a blueprint that provides a static and conceptual view of the range of capabilities available within an organisation. These capabilities may be leveraged to deliver a service or to develop a new service.
Activity models	Activity models provide blueprints of the activities conducted to deliver a service and the interactions between them.

Syllabus section 3: Activity Analysis and Modelling

LO 3.1 Model and analyse the service activities

SIPOC	**Elements** **S**upplier, **I**nput, **P**rocess, **O**utput, **C**ustomer **Process governance** • Responsibilities • Policies • Standards • Measures **Process mechanisms** • Tools • Skills • Knowledge
Value stream diagram	A value stream diagram provides a representation of the activities that are carried out collectively to offer a product or service to internal or external stakeholders.
Business activity model	A business activity model provides a conceptual representation of the desired or ideal business activities to be undertaken within a business system in order to fulfil a particular world view regarding that system. Five categories of activity are represented: Plan; Enable; Do; Monitor; Control.
Business use case diagram	A business use case diagram provides a holistic and conceptual representation of the following elements of a business system: • the boundary of the business system • the actors wishing to engage with the business system • the business use cases (features) provided by the business system • the interactions between the actors and the business use cases.
Service blueprint	A service blueprint is a detailed visual representation of a service, showing the entire customer journey, including the stages, touchpoints and 'back office' elements required to deliver a service. The customer-facing service touchpoints are known as the 'front stage' and are represented with the corresponding 'back stage' elements that support the customer-facing work. The service blueprint shows the interactions and connections between the front stage and back stage activities and resources.
Ecosystem information flow diagram	An information flow diagram shows the information/data that is passed between either the organisation and a service system or between two service systems, within the organisation's ecosystem.

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LO 3.2 Apply the gaps model of service design

Gap 1: The analysis gap	The gap between the customers' requirements regarding the service and how the service requirements are defined by the organisation. This results from a failure to apply effective requirements engineering techniques.
Gap 2: The design gap	The gap between the defined service requirements and the designed service. This results from a failure to understand the service requirements and, accordingly, design the services that the customers want and expect.
Gap 3: The delivery gap	The gap between the designed service and the service delivered to customers. This results from a failure that occurs during service delivery, despite the service design meeting the customer needs.
Gap 4: The service communication gap	The gap between the designed service and the service promises made to customers. This results from a failure to communicate accurately the characteristics of the service offered by the organisation.
Gap 5: The service perception gap	The gap between the service expected by the customer and the service experienced by the customer. This may result from any of the other gaps.

Syllabus section 4: Capability Analysis and Modelling

LO 4.1 Define the concept of a capability

A business capability represents a task or action that an organisation has the ability or motivation to perform.

LO 4.2 Build a capability model

Business capability model strata	**Strategic: direction setting** Capabilities that are critical to the organisation's plan for success. **Primary: customer-facing** Capabilities that directly impact the organisation's interactions with customers. **Support: non-customer-facing** Capabilities that are non-customer facing that contribute towards the organisation's internal operation.
Business capability taxonomy	**Capability groups** Contains a minimum of two lower-level business capabilities. Can include other capability groups (known as nested capability groups). **Business capability** The lowest level building blocks of the capability model.

LO 4.3 Identify the components required to establish a capability

Skilled personnel	The individuals and teams with the knowledge and skill required to perform the tasks and actions of a capability.
Facilities and equipment	The facilities and equipment required to support the execution of a capability. This encompasses the physical and technological infrastructures including the software applications, platforms and related equipment.

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Processes, routines and standards	The processes, routines and standards that are required to conduct the tasks and actions when executing a capability.
Authority	The provision of authority or permission to execute the tasks and actions of a capability.
Information	The supporting information and data required to execute a capability.

4.4 Explain the link between capabilities and service attributes

The components required to establish a capability enable and impact an organisation's ability to deliver the stated service value proposition(s). The value proposition attributes for a service are grouped into three categories:

Suitability attributes: Functionality; Price; Quality.

Convenience attributes: Choice; Availability.

Personal affinity: Image/Brand; Relationships.

Syllabus section 5: Ecosystem Analysis and Modelling

LO 5.1 Explain key ecosystem analysis concepts

The concept of 'modularity'	Modularity is a concept that describes the use and configuration of independent components to form an entire system or composite module. Each module performs a specific function and may be used interchangeably. Modules may be created, modified or exchanged independently of the entire system or composite module.
The concept of 'loose coupling'	Coupling originated as a software engineering concept that is concerned with the degree of interdependence between system modules. Within an enterprise or service ecosystem, coupling refers to the extent to which there is interdependence between service systems. The concept of 'loose coupling' concerns where service systems that operate independently of each other. The opposite of the concept of 'loose coupling' is 'tight coupling'. This is where individual modules are not deployed independently of each other and have high dependency.
The concept of 'tight cohesion'	Cohesion is concerned with the extent to which the elements within a component are closely related and work collectively to achieve the defined purpose for that component. This concept can be applied to a service system within an enterprise or service ecosystem. The concept of 'tight cohesion' concerns a high degree of alignment and resource integration within a service system and a focus on achieving a specific goal or outcome. The opposite of the concept of 'tight cohesion' is 'loose cohesion'. This is where there is a low degree of alignment and resource integration, and a lack of focus on achieving a specific goal or outcome.

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	Loose coupling and tight cohesion enable reuse and configuration modification.
The concept of 'contestability'	Contestability is a term used within economics to describe a market where there are low barriers to entry or exit. When applied to a service system or service ecosystem, the concept enables the assessment of the extent to which there are barriers to entry or exit regarding individual service systems. The opposite of the concept of 'contestability' is 'incontestability'. This is where there are high barriers to entry or exit.

LO 5.2 Model the ecosystem levels

The enterprise ecosystem	A model of the entire networked set of service systems engaged in the delivery of the organisation's products and services.
The service ecosystem	A model of the networked set of service systems engaged in the delivery of a product or service delivered by an organisation.

LO 5.3 Explain ecosystem linkages

The link between capabilities and ecosystems	Each service system within an enterprise ecosystem or a service ecosystem is required to deliver defined capabilities that fulfil the requirements of the organisation or service. The delivery of a capability is represented by the links shown to other service systems. Management of this relationship and the establishment of service levels is essential for the successful delivery of each capability.
Service Level Agreements (SLAs)	A formal contract or agreement between a service provider and a customer. Includes the: - Service description and service level expectations - Performance measures and reporting approach - Responsibilities of the service provider and customer - Escalation procedures and penalties - Timeframe for the agreement - Conditions for renewal and termination of the agreement
The term 'service integration'	Service integration concerns the management of the service providers, both internal and external, that contribute to a service offered by an organisation. The aim is to ensure that the providers work collaboratively with the organisation to ensure that customers receive a service that meets their utility and experiential requirements seamlessly.
The term 'service interface'	A service interface is the mechanism used to invoke a service from a provider or to communicate with that provider. A variety of technological approaches, such as online portals, may establish an interface. Non technological approaches can also establish an interface, such as a human or a document.

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Syllabus section 6: Service Performance Frameworks

LO 6.1 Identify and explain key service performance measurement frameworks

Balanced Scorecard	**Balanced Scorecard:** The Balanced Scorecard (BSC) identifies the need to measure four business-critical dimensions in order to achieve a comprehensive view of an organisation's performance. The four dimensions are: • **Financial**: This perspective encompasses measures related to financial indicators such as revenue, costs, profits and return on assets. • **Customer**: This perspective encompasses measures related to areas such as customer retention, customer satisfaction, customer acquisition, and customer profitability. • **Internal Business Process**: This perspective encompasses measures related to operational efficiency, and includes metrics related to areas such as quality, time and cost efficiency. • **Learning and Growth**: This perspective encompasses measures related to investment in products/services, the level of innovation in the organisation and the development of staff. Types of performance measures are: **OKR**: Consist of a goal (Objective) and 3-5 measures (Key Results) that track progress towards the completion of the goal. **CSF/KPI**: A Critical Success Factor (CSF) identifies an area where good performance is essential to the organisation's success. CSFs are related to an organisational objective and are measured using Key Performance Indicators (KPIs). A KPI identifies a specific performance measure and is allocated a quantifiable target against which performance is monitored and measured.
Net Promoter Score	The Net Promoter Score (NPS) measures the volume of net-promoters within an organisation's customer base. A high NPS indicates that the organisation's customers are likely to promote the organisation to others. A low or negative score indicates that customers are unlikely to recommend the organisation and may complain to others about the organisation. **Calculating the NPS** Surveys are used to collect data from customers about their views on an organisation. Customers are asked to allocate a rating using a scale, such as 1-10. The responses are categorised into 'Detractors' (responses 1-6, 'Neutrals' (responses 7-8) and 'Promoters' (responses 9-10). The NPS is calculated as follows: • Calculate the percentage of customers who are promoters. • Calculate the percentage of customers who are detractors. • Subtract the percentage of detractors from the percentage of promoters to determine the NPS.
Customer Effort Score	Customer Effort Score (CES) is a measure of customer satisfaction that can be used on its own or alongside NPS. It asks customers to rate how much effort they needed to search for, purchase, use or seek assistance with an

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	organisation's products or services. CES relates to specific transactions rather than the customers' view of an organisation. Questions are posed with a defined response scale and the responses are used to categorise the responses. The responses are collated to determine the percentages of loyal customers and those who are less positive about the organisation. These results may be used as a basis for further analysis to uncover the root causes of any issues and determine how they may be addressed.
Servqual	The SERVQUAL model (Parasuraman et al., 1988) was developed to evaluate customer perception about an organisation. The model comprises five dimensions: 1. **Tangibility**: the physical facilities, equipment, and appearance of personnel 2. **Reliability**: the ability to perform the promised service dependably and accurately 3. **Responsiveness**: the willingness to help customers and provide prompt service 4. **Assurance**: the knowledge and courtesy of employees and their ability to inspire trust and confidence 5. **Empathy**: the caring individualised attention the firm provides to its customers

LO 6.2 Explain the link between service performance measures and the service value proposition

Service performance measures are a means of assessing the ability of the organisation to achieve the stated service value proposition(s).

Syllabus section 7: Service Improvement and Maintenance

LO 7.1 Explain service improvement approaches

Current and target state architectures	The **current state** architecture represents the organising logic of the architectural components that enable the current operating model for an organisation or business area. The **target state** architecture represents the organising logic of the architectural components that are required to support the execution of an organisation's strategy and the achievement of its objectives. Gap analysis concerns the comparison of the current and target state architectures to identify the changes that are required to establish the target state.
CALM model (Capability Analysis and Leverage model) © Assist Knowledge Development	The CALM model is a framework for analysing the current and target state of a service or capability using the questions 'why?', 'what?' and 'how?'. **CALM model**

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	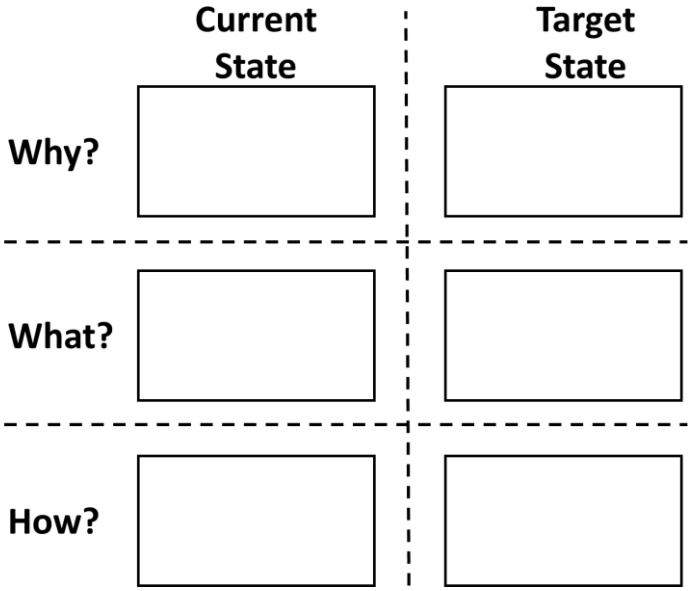 (Source: Business Architecture, Hunsley, Paul, Banner, Greenhalgh and Rothwell, 2025)
Linear and evolutionary approaches	The **linear** approach to service improvement assumes that requirements are well understood at an early stage and that stakeholders have limited time for collaboration. Service improvements are designed, delivered, tested and deployed against the defined requirements. The approach is characterised by upfront planning and a fixed boundary of quality, budget and time constraints. The **evolutionary** approach to service improvement assumes that requirements are not well understood and need to evolve, and that stakeholders have sufficient time for collaboration. Service improvements are developed and deployed incrementally. The approach is characterised by allowing understanding to advance as the work progresses, distinguishing between immediate and longer-term business priorities, and obtaining feedback to validate assumptions and ensure needs are met.

LO 7.2 Identify the drivers for ecosystem change

PESTLE elements	**Political**: Forces originating within the international, national and local political environments. **Economic**: Forces originating within the international, national and local economic contexts. **Socio-cultural**: Trends emerging from within society, including demographic and cultural trends. **Technological**: Developments concerning digital and other forms of technology. **Legal**: Changes to relevant laws or regulations. **Environmental**: Trends and issues that concern the natural environment.
5-forces	The Five Forces Model (Porter, 1980) aids with the analysis of the relative positioning and power of the organisations operating in a particular industry or business domain. The forces identified by Porter concern the extent of: • Competitive rivalry between existing competitor organisations • Bargaining power of suppliers • Bargaining power of buyers

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	• Threat from potential new entrants • Threat from possible substitute products or services
Service system changes	Drivers for change may originate from the service systems within the ecosystem. These changes may result from responses to environmental change or may emanate from internal decisions regarding the VMOST for the service system organisation.

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