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## Overview

This sub discipline covers the competencies required to integrate a range of system elements together operationally in order to form a coherent set of capabilities that meets the business needs. These elements or components will already have been subject to systems development activity to ensure that they can interface with each other in order to produce an holistic 'end to end' IT/technology system. It also covers the competencies required to integrate larger IT/technology systems, system components and subsystems, each providing unique and discrete services, in order to support processes which typically span either across business units and functions within an organisation and/or across organisational boundaries.

Cross organisational integration activities are most commonly required as a result of business and organisational change such as merger, acquisition partnering and joint venture activity between organisations, during which the need to integrate and process information, particularly that relating to customers and revenue, must be maintained, protected and operated with a minimum of disruption. Failure to integrate systems rapidly and seamlessly is frequently cited as one of the main causes of the failure to realise the value from such wide ranging business change

Systems integration activities require a broad range of competencies due to the diverse characteristics of individual system components that need to be integrated together. These components may include hardware, software and network system capabilities that have been developed, acquired or commissioned. Some may be new and others may already be implemented and used within the infrastructure and are available for reuse

**Performance  
criteria**

*You must be able to:*

**Contribute to the management of systems integration activities**

- P1 Use and apply the systems development lifecycle, as it applies to systems integration, in line with organisational standards
- P2 Correctly select and apply systems integration procedures, tools and techniques in line with organisational standards
- P3 Gather, collate and correctly use specified information, from all applicable organisations, in architecture models, system, subsystem and component designs to inform and direct systems integration activities

**Perform systems integration activities**

*You must be able to:*

- P4 Correctly use systems integration procedures, tools and techniques in line with organisational standards
- P5 Accurately identify redundant systems, system components or subsystems and ensure that they are correctly decommissioned
- P6 Document clearly and accurately specified information gathered for system integration activities
- P7 Communicate effectively with sponsors and stakeholders during systems integration activities as directed
- P8 Provide and exchange accurate and appropriate information within the organisation and across multiple organisations as directed

**Control systems integration activities**

*You must be able to:*

- P9 Correctly use the procedures, tools and techniques to monitor the quality and effectiveness of system integration activities
- P10 Correctly use the procedures, tools and techniques to monitor the alignment of systems integration activities with all relevant legislation, regulations and internal and external standards
- P11 Contribute to the co-ordination of systems integration with systems development, testing, installation, implementation and handover
- P12 Assist with the analysis of all information gathered during systems integration activities in order to inform decision making and action, as directed

**Knowledge and understanding**

**Contribute to the management of systems integration activities**

*You need to know and understand:*

- K1 the relationships between systems architectures, systems design deliverables, systems development and systems integration activities
- K2 the fact that differing system components and subsystems may have diverse characteristics and these must be considered during systems integration activities
- K3 the importance of:
  - K3.1 verifying the accuracy, currency, completeness and relevance of data and information used by systems integration activities
  - K3.2 systems integration accurately reflecting systems architecture and systems design
  - K3.3 ensuring co-ordination between systems integration, development, testing, installation, implementation and handover
- K4 the importance and role of systems integration in:
  - K4.1 business merger, demerger and acquisition activities
  - K4.2 the development and support of co-operative business processes that span multiple organizations
  - K4.3 delivering an 'end to end' IT/technology solution to meet business needs
- K5 the fact that systems integration activities frequently involve a high degree of disruption and risk to one or more organizations
- K6 apply systems integration standards
- K7 select and apply procedures, tools and techniques to monitor the alignment of systems integration activities with all relevant legislation, regulations and external standards
- K8 identify the potential implications for organisations that are involved in systems integration activities
- K9 gather, collate and use information to inform and direct systems integration activities:
  - K9.1 contained within architecture models
  - K9.2 relating to the individual systems, system components and subsystems
- K10 document budgets, plans and schedules to manage systems integration activities
- K11 document how systems integration activities need to support business processes that span multiple organizations
- K12 interpret how individual systems, system components and subsystems need to integrate in order to support business processes and/or value chains, either within an organisation or across multiple organizations
- K13 ensure the availability of the IT/technology systems, services and assets that need to be used during systems integration activities.

**Perform systems integration activities**

*You need to know and understand:*

- K14 the importance of:
  - K14.1 systems integration accurately reflecting systems architecture and systems design
  - K14.2 service level requirements being incorporated within systems

- integration activities
- K14.3 systems integrity and security needs being met during systems integration activity
- K15 optimising the use of system resources in systems integration work, including reuse and decommissioning of components where appropriate
- K16 who are the internal and external sponsors of and stakeholders for any systems integration activities
- K17 the importance of:
  - K17.1 effective communications with sponsors, stakeholders and external bodies during systems integration activities
  - K17.2 effective communications with other individuals from within the organisation or other organisations involved in systems integration activities
  - K17.3 ensuring that appropriate documentation and support materials associated with any IT/ technology system are produced and/or supplied during systems integration activities
- K18 presenting information produced by systems integration activities, particularly information relating to how the proposed IT/technology solution(s) will function, in an understandable form to a wide range of sponsors, stakeholders and other individuals, in order to confirm understanding and ensure needs are being met
- K19 explaining, discussing, negotiating and agreeing with sponsors and stakeholders, during systems integration, how the target IT/technology system(s) will function
- K20 apply systems integration standards
- K21 identify potentially redundant system components or subsystems
- K22 ensure that redundant systems, system components or subsystems are decommissioned
- K23 ensure that the rules and controls required to ensure the integrity and security of the proposed IT/technology system are applied and integrated effectively across systems, system components and subsystems
- K24 take actions:
  - K24.1 to incorporate the full range of design specifications in order to integrate all relevant systems, system components and subsystems into the 'end to end' IT/technology system(s)
  - K24.2 to explain, discuss and agree how any proposed IT/technology system(s) will function with sponsors and stakeholders
  - K24.3 as a result of decisions made by sponsors, stakeholders and external bodies
- K25 communicate with a wide range of individuals within and across organisations to design, plan, execute and manage systems integration activities.

*You need to know and understand:*

**Control systems integration activities**

- K26 the importance of:
  - K26.1 systems integration accurately reflecting systems architecture and systems design
  - K26.2 ensuring that service level requirements are incorporated considered

- within systems integration activities
- K26.3 ensuring systems integrity and security needs are met during systems integration activity
- K26.4 ensuring co-ordination between systems integration, development, testing, installation, implementation and handover
- K26.5 managing changes to business requirements through change control mechanisms during systems integration activities
- K26.6 securing sign off of the physical systems integration deliverables prior to handover to the business
- K27 the potential implications:
  - K27.1 of any relevant legislation, regulations and internal and external standards
  - K27.2 of systems integration deliverables being incorrect, incomplete, inadequate and/or inappropriate
  - K27.3 to an organisation or organisations of systems integration deliverables not meeting the business needs
  - K27.4 of failings of integrity, confidentiality and information security both within individual organisations and across them during systems integration activities
- K28 the need to monitor the:
  - K28.1 quality and effectiveness of systems integration activities within and across impacted organizations
  - K28.2 alignment of systems integration work with systems design work
  - K28.3 alignment of systems integration activities with all relevant legislation, regulations and internal and external standards
- K29 gather, collate and use information from monitoring systems integration activities
- K30 interpret information gathered during systems integration activities in order to inform decision making and action
- K31 document:
  - K31.1 decisions made during systems integration activities
  - K31.2 the progress being made against systems integration budgets, plans and schedules

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## Systems Integration Level 4 Role

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