
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:

Plan and prepare for systems integration

- P1 Develop and maintain policies and standards relating to system integration
- P2 Correctly implement and maintain systems integration procedures, tools and techniques in line with organisational standards
- P3 Correctly identify all internal and external sponsors of and stakeholders for systems integration activities
- P4 Correctly identify which organisations and individuals may need to be involved in systems integration activities
- P5 Prepare accurate budgets and plans for systems integration activities
- P6 Apply best practice and lessons learned to system integration activities.

Manage systems integration activities

You must be able to:

- P7 Identify, source and use all relevant information required to support systems integration activities
- P8 Verify the accuracy, currency, completeness and relevance of information collected, used, produced and documented as part of systems integration activities
- P9 Take appropriate and timely action in the event of the deliverables of systems integration being incorrect, incomplete or inadequate or failing to meet the business needs
- P10 Monitor the operation of systems integration activities to ensure quality and compliance with all legislation, regulations and standards
- P11 Manage effectively the processes, procedures, methods, tools and techniques to monitor the alignment and progress of systems integration activities with any relevant systems architectures
- P12 Identify, use and manage effectively the budgets, plans and schedules for any systems integration assignment
- P13 Evaluate all information gathered during systems integration activities in order to identify lessons for future activities

Manage relationships during system integration activities

You must be able to:

- P14 Ensure effective constructive relationships are maintained with sponsors, stakeholders and external bodies during systems integration activities
- P15 Ensure co-ordination between systems integration, development, testing, installation, implementation and handover activities
- P16 Manage and monitor the quality and effectiveness of systems integration activities within individual organisations that are impacted, and across them
- P17 Effectively manage relationships with external providers of systems integration services
- P18 Monitor and report on the effectiveness of external providers of systems integration services
- P19 Clearly and accurately present and report findings and issues arising from system integration activities within own area of accountability
- P20 Communicate effectively and in a timely manner with sponsors, stakeholders and external bodies on all aspects of system integration activities

Knowledge and understanding

You need to know and understand:

Plan and prepare for systems integration

- K1 the range of approaches that may be used to undertake systems integration, and their appropriateness in a range of business and organisational contexts
- K2 the range of issues associated with systems integration activities
- K3 who:
 - K3.1 needs to be involved in the planning, scheduling and execution of any systems integration activities
 - K3.2 needs to sign off any systems integration activities
 - K3.3 are the individuals from a range of organisations who need to engage in systems integration assignments that span multiple organizations
- K4 the challenges involved in combining systems, system components and/or subsystems into working solutions that support business processes for one or many organizations
- K5 the external factors which may impact on systems integration work
- K6 the systems, services and assets and associated business processes that may need to be integrated as part of the systems integration activities
- K7 design and develop policies and standards relating to systems integration activities
- K8 implement the procedures, tools and techniques that may be used to conduct systems integration activities
- K9 implement the procedures, tools and techniques to monitor the alignment of systems integration activities with:
 - K9.1 the business needs of any organisations impacted by them
 - K9.2 all relevant legislation, regulations and external standards
 - K9.3 relevant systems architectures
- K10 the procedures, tools and techniques to monitor the progress of systems integration activities against budgets and plans
- K11 identify and select :
 - K11.1 who should be involved in systems integration activities
 - K11.2 who should be involved in the sign off of systems integration activities
 - K11.3 who are the internal and external sponsors of and stakeholders for any systems integration activities
 - K11.4 which organisations may need to be involved in systems integration activities
 - K11.5 what systems, system components, subsystems, infrastructure, business processes, and individuals across one or more organisations need to be involved in systems integration activities
- K12 identify external factors and their implications on systems integration activities
- K13 use and apply:
 - K13.1 the most appropriate approaches to undertake systems integration activities
 - K13.2 best practice in systems integration activities
 - K13.3 lessons learned from prior experience and/or others' experiences in systems integration activities
- K14 prepare budgets and plans for systems integration activities

Manage systems integration activities

You need to know and understand:

- K15 the importance of maintaining the integrity and security of individual systems and how they inter-operate, during systems integration activities
- K16 the importance of ensuring that information is made available to update the systems architectures of any relevant organisations as a result of systems integration activities
- K17 the need for monitoring the alignment of systems integration activities with:
 - K17.1 the business needs of any organisations impacted by them
 - K17.2 relevant systems architectures
- K18 the need for monitoring:
 - K18.1 the quality and effectiveness of systems integration activities
 - K18.2 the progress of systems integration activities against budgets and plans
- K19 Identify and select:
 - K19.1 how systems integration activities need to work in order to support business processes that span multiple organizations
 - K19.2 how the target 'end to end' IT/technology system(s) needs to operate and which system components and subsystems need to be integrated into it
 - K19.3 which technologies are available and may be required to support the integration of systems, system components and/or subsystems into an IT/technology system supporting an organisation and/or organizations
 - K19.4 service level and other operational requirements that need to be incorporated within systems integration deliverables
- K20 identify, select and use information to inform systems integration activities:
 - K20.1 from business analysis and other design, development and testing activities
 - K20.2 contained within architecture models
 - K20.3 relating to the organisations that may need to be involved in systems integration activities
 - K20.4 relating to how systems integration activities need to support business processes that span multiple organizations
- K21 verify the accuracy, currency, completeness and relevance of information collected, used, produced and documented as part of systems integration activities
- K22 use and apply the procedures, tools and techniques to monitor:
 - K22.1 the alignment of systems integration activities with any relevant systems architectures
 - K22.2 the progress of systems integration activities against budgets, plans and schedules
- K23 ensure the alignment of systems integration activities with all relevant legislation, regulations and external standards
- K24 use and apply information, from monitoring the progress of systems integration activities against budgets and plans
- K25 monitor:

- K25.1 the involvement and engagement of all relevant organisations in systems integration assignments that span multiple organizations
- K25.2 the quality and effectiveness of systems integration activities within individual organisations that are impacted, and across them
- K25.3 the progress of systems integration activities against budgets, plans and schedules
- K25.4 the alignment of systems integration activities with the business needs of any organisations impacted by them
- K25.5 the alignment of systems integration activities with the systems architectures relevant to any organisations impacted by or involving them
- K25.6 compliance with all relevant legislation, regulations and external standards relating to systems integration activities
- K25.7 compliance with all professional and ethical standards relating to systems integration activities
- K25.8 the quality and effectiveness of external providers of systems integration services
- K26 manage:
 - K26.1 the integration of the individual systems components and subsystems to align with systems architectures, systems design and development deliverables and service level requirements
 - K26.2 changes to business requirements through change control mechanisms during systems design integration activities
 - K26.3 the alignment of systems integration activities with all relevant legislation, regulations and external standards
 - K26.4 the execution and progress of systems integration activities
 - K26.5 the alignment of systems integration activities with any related organizational design/redesign, process design/redesign and/or business change
 - K26.6 issues arising as a result of systems integration activities
 - K26.7 external factors affecting systems integration activities
- K27 take actions:
 - K27.1 to incorporate all relevant systems, system components, subsystems infrastructure, business processes, and individuals across one or more organisations during in systems integration activities
 - K27.2 to integrate individual systems, systems components and subsystems to align with systems architectures, systems design and development deliverables and service level requirements
 - K27.3 to secure sign off to the systems integration deliverables by sponsors and stakeholders
 - K27.4 to take account of factors external to the organisation in systems integration activities
 - K27.5 in the event of breaches of security and integrity during systems integration activities
 - K27.6 in the event of systems integration activities not supporting the business needs of any organisation involved in or impacted by them
 - K27.7 in the event of systems integration deliverables being inaccurate, incomplete and/or inadequate
 - K27.8 in the event of systems integration activities being out of alignment with systems architecture, data and business analysis and systems design and development deliverables
 - K27.9 in the event of external providers not providing the appropriate quality

- of systems integration services
- K28 take actions to ensure:
 - K28.1 the integrity, confidentiality and information security, both within organisations and across them, during systems integration activities
 - K28.2 the integrity and security of individual systems and how they inter-operate, during systems integration activities
 - K28.3 co-ordination between systems integration, development, testing, installation, implementation and handover activities
 - K28.4 systems integration activities are integrated/incorporated into, and support, where appropriate, wider business programmes
 - K28.5 that systems integration activities are kept on schedule and align with budgets and plans
- K29 design and develop systems integration deliverables aligned to systems architectures, and other systems design and development deliverables from one or more organisations

manage relationships during system integration activities

- K30 the importance of:
 - K30.1 incorporating systems integration activities into wider business programmes
 - K30.2 managing relationships with sponsors, stakeholders and external bodies on matters relating to systems integration
- K31 the need of to monitor:
 - K31.1 the effectiveness and quality of external providers of systems integration services
 - K31.2 the involvement and engagement of all relevant organisations in systems integration assignments that span multiple organizations
- K32 who are the external providers of systems integration services
- K33 report:
 - K33.1 the potential implications for the organisation of failures during systems integration activities
 - K33.2 issues arising from monitoring systems integration activities against budgets, plans and schedules
 - K33.3 findings from monitoring the quality and effectiveness of systems integration activities
 - K33.4 the progress of systems integration activities to sponsors, stakeholders and other individuals
- K34 manage:
 - K34.1 relationships with sponsors, stakeholders and external bodies during systems integration activities
 - K34.2 relationships with external providers offering systems integration services
- K35 analyse and interpret the results gained from monitoring systems integration activities
- K36 present information produced by systems integration activities, particularly relating to how the proposed IT/technology system(s) will function, in an understandable form to a wide range of sponsors, stakeholders and other individuals, in order to confirm understanding and ensure business needs are being met
- K37 present the results gained from monitoring systems integration

You need to know and understand:

- activities across individual organisations and across all organisations that may be impacted by them
- K38 review and report on the quality and effectiveness of:
 - K38.1 systems integration activities
 - K38.2 external providers of systems integration services
- K39 take actions to establish effective relationships with external providers of systems integration services
- K40 communicate effectively and in a timely manner:
 - K40.1 with sponsors, stakeholders and external bodies on all aspects of systems integration activities and how the target IT/technology system(s) will function
 - K40.2 the progress of systems integration activities against budgets and plans individuals involved in and impacted by them

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