ESKITP4076
Systems Design Level 6 Role

Overview

This sub-discipline is concerned with the competencies required to create, maintain and manage both logical and physical designs for an information technology solution based on the information defined in a range of deliverables produced by business, data, HCI and systems analysis activities. A systems design is effectively a blueprint or plan for how a proposed information technology system will operate in order to meet business needs. Design activities produce solutions to address the requirements specified through analysis activities, including, at a detailed level, functions and processing, interfaces, data handling and storage needs and how the system will be used by and interact with people, as appropriate.

Logical systems design typically describes the functions, processes and data handling needs of the information technology solution independent of any specific technologies, platforms or products that may be used in its actual development. One or more logical solutions may be proposed.

Physical design translates these logical design principles into a proposed physical design, where components such as application software products, file and database systems and infrastructure components are specified and the information contained in the logical design is converted into a design format that takes account of practical considerations such as location of physical assets and performance of the system.

In some organisations, typically those where rapid development approaches are used, systems design may be undertaken in parallel with data design and HCI design. Furthermore, in these organisations, an iterative process of systems analysis and systems design may also take place. Systems design commonly incorporates aspects of data design and HCI design in order to produce an holistic, ‘end to end’ view of the proposed information technology system’s design

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Performance criteria

Direct the strategy for system/solution/service designs

You must be able to:

P1 Design, develop, implement and maintain effective strategy and policies relating to system/solution/service design activities

P2 Correctly identify the impact of any physical design for an ‘end to end’ IT/technology system, service and or asset on business activities and users, communicating the impact clearly and in a timely manner to sponsors, stakeholders and external bodies

P3 Correctly identify the implications of any physical design for an ‘end to end’ IT/technology system, service and/or asset on technology infrastructure, including relevant environmental factors, resources and operational activities

P4 Ensure that that all elements of an ‘end to end’ design combine together into an integrated and consistent whole and that the integrity and coherency of the ‘end to end’ system/solution/service design is maintained

P5 Ensure that the implications of any physical design for any ‘end to end’ IT/technology system/solution/service on technology infrastructure, including relevant environmental factors and operational activities and resources are reviewed and signed off by appropriate individuals and/or organisations prior to development activities commencing

Control the delivery for system/solution/service designs

You must be able to:

P6 Verify the consistency, integrity and alignment of all elements of an ‘end to end’ system/solution/service design

P7 Negotiate effectively and empathetically with sponsors and stakeholders during system/solution/service design as to how the target 'end to end' IT/technology system, service and/or asset, service and/or asset will function

P8 Make well reasoned decisions on when and how to use external providers of system/solution/service design services, selecting the preferred organisations and negotiating/contracting with them accordingly on behalf of the organisation

P9 Regularly monitor the quality and effectiveness of external providers of

P10 system/solution/service design services, identifying and recommending action where appropriate

Monitor system/solution/service designs activities and their deliverables

You must be able to:

P11 Effectively manage and regularly monitor the timely delivery against plan of individual design deliverables produced by internal individuals and groups and external individual, groups and organisations in support of an ‘end to end IT/technology system/solution/service design

P12 Routinely monitor the quality and effectiveness of ‘end to end’ system/solution/service design activities and their deliverables, identifying what actions may be taken in the event of them not supporting the business needs, service requirements and IT technology, analysis and design deliverables

P13 Be fully accountable for the quality and effectiveness of any logical and physical ‘end to end’ system/solution/service design deliverables and activities and their alignment with business and service requirements and architecture, analysis and design deliverables

P14 Provide timely and objective advice and guidance to others on all aspects of system/solution/service design activities and their deliverables, including best practice

Knowledge and understanding

Direct the strategy for system/solution/service designs

You need to know and understand:

K1 Design and develop
K1.1 strategy and policies relating to system/solution/service design activities and their deliverables
K1.2 strategy and policies to ensure the alignment of system/solution/service design activities and their deliverables with all relevant legislation, regulations and external standards
K1.3 the processes, procedures, methods, tools and techniques to monitor the alignment of system/solution/service design activities and their deliverables with all relevant legislation, regulations and external standards
K2 Identify
K2.1 which individual or groups needs to be the design authority for any 'end to end' system/solution/service design
K2.2 service and operational performance requirements in order that they may be incorporated within system/solution/service design deliverables
K2.3 best practice in system/solution/service design activities
K2.4 the implications of any physical design for an 'end to end' IT/technology system, service and/or asset on technology infrastructure, including relevant environmental factors, resources and operational activities
K2.5 the implications of any physical design for an 'end to end' IT/technology system, service and/or asset on business activities and users
K2.6 when and how to use external providers of system/solution/service design services
K2.7 which external providers of system/solution/service design services to use
K2.8 what actions may be taken in the event of system/solution/service design activities not supporting the business needs
K2.9 what actions may be taken in the event of system/solution/service design activities not meeting the service and operational performance needs
K2.10 what actions may be taken in the event of system/solution/service design activities
K2.11 being incorrect, incomplete, inadequate and/or inappropriate
K2.12 what actions may be taken in the event of system/solution/service design activities not aligning with IT/technology architecture deliverables
K3 Implement and maintain
K3.1 strategy and policies relating to system/solution/service design activities and their deliverables

	K3.2	strategy and policies to ensure the alignment of system/solution/service design activities and their deliverables with all relevant legislation, regulations and external standards
	K4	Authorise, agree and contract
	K4.1	how the target IT/technology system, service and/or asset, service and/or asset will function with sponsors and stakeholders during system/solution/service design
	K4.2	actions
	K4.3	approaches
	K4.4	strategy, policies, plans, standards, tools and techniques
	K4.5	contractual arrangements with external providers of system/solution/service design services
	K4.6	decisions
	K5	Be accountable for
	K5.1	the quality and effectiveness of any logical and physical 'end to end' system/solution/service design deliverables and activities
	K5.2	the alignment of system/solution/service design activities with IT/technology architecture, design and analysis deliverables
	K5.3	the alignment of system/solution/service design activities with business needs, service objectives and the service strategy
	K6	What are the
	K6.1	implications of any physical design for an 'end to end' IT/technology system/solution/service on IT/technology infrastructure, including relevant environmental factors and operational activities
	K6.2	range of approaches that may be used for the logical and physical design of an IT/technology system/solution/service, and their appropriateness in a range of business and organisational contexts
	K6.3	range of issues associated with system/solution/service design activities
	K6.4	implications of any physical design for an 'end to end' IT/technology system/solution/service on business activities and users
	K6.5	actions that may be taken in the event of system/solution/service design activities being out of alignment with architecture and analysis deliverables
	K6.6	issues involved in outsourcing system/solution/service design activities
	Control the delivery for system/solution/service designs	
You need to know and understand:		
	K7	Verify
	K7.1	the accuracy and completeness of any translation from logical to physical system/solution/service designs
	K7.2	the alignment of the 'end to end' system/solution/service designs with the business requirements

K7.3 the alignment of the ‘end to end’ system/solution/service designs with IT/technology architectures
K7.4 the alignment of the ‘end to end’ system/solution/service designs with service objectives and the service strategy
K7.5 the consistency, integrity and alignment of all elements of an ‘ end to end’ system/solution/service design
K7.6 the implications of any physical design for an ‘end to end’ IT/technology system, service and/or asset on business activities and users
K8 Negotiate how the target IT/technology system, service and/or asset, service and/or asset will function with sponsors and stakeholders during system/solution/service design
K9 Take action
K9.1 in the event of system/solution/service design activities being out of alignment with the business requirements
K9.2 in the event of system/solution/service design activities being out of alignment with service objectives and the service strategy
K9.3 in the event of system/solution/service design activities being out of alignment with architecture and analysis deliverables
K9.4 to ensure that all elements of an ¡¥end to end¡¦ design combine together into an integrated and consistent whole
K9.5 that the implications of any physical design for any ¡¥end to end¡¦ IT/technology system/solution/service on technology infrastructure, including relevant environmental factors and operational activities and resources are reviewed and signed off by appropriate individuals and/or organisations prior to development activities commencing
K9.6 that the implications of any physical design for an ‘end to end’ IT/technology system, service and/or asset on business activities and users are understood and signed off by appropriately authorised individuals
K9.7 the integrity and coherency of the ‘end to end’ system/solution/service design
K10 Liaise with sponsors, stakeholders and external bodies on matters relating to the impact of any physical design for an ‘end to end’ IT/technology system, service and or asset on business activities and users
K11 Make decisions
K11.1 on the appropriateness of using external suppliers of system/solution/service design services
K11.2 on which external providers of system/solution/service design services to use
K12 Manage
K12.1 the delivery of individual design deliverables produced by internal individuals and groups and external individual, groups and

organisations in support of an 'end to end IT/technology system/solution/service design

K12.2 the progress of the 'end to end' system/solution/service design against plan

K13 Who are external providers of system/solution/service design services

Monitor system/solution/service designs activities and their deliverables

You need to know and understand:

K14 Monitor

K14.1 the alignment of system/solution/service design activities with service objectives and the service strategy

K14.2 the alignment of system/solution/service design activities with IT/technology architectures

K14.3 the progress of the 'end to end' system/solution/service design against plan

K14.4 the quality and effectiveness of 'end to end' system/solution/service design activities and their deliverables

K14.5 the quality and effectiveness of external providers of system/solution/service design services

K15 Analyse

K15.1 the results gained from monitoring the alignment of system/solution/service design activities with IT/technology architectures

K15.2 the results gained from monitoring the alignment of system/solution/service design activities with service objectives and the service strategy

K15.3 the results gained from monitoring the quality and effectiveness of external providers of system/solution/service design services

K16 Report

K16.1 the results of monitoring the quality and effectiveness of external providers of system/solution/service design services

K16.2 the implications of any physical design for an 'end to end' IT/technology system, service and/or asset on technology infrastructure, including relevant environmental factors, resources and operational activities

K16.3 the implications of any physical design for an 'end to end' IT/technology system, service and/or asset on business activities and users

K16.4 the progress of the 'end to end' system/solution/service design against plan

K17 Review the

K17.1 findings from monitoring the alignment of any 'end to end' system/solution/service design with a range of factors and

requirements

K17.2 design recommendations for any ‘end to end’ system/solution/service design

K17.3 quality and effectiveness of system/solution/service design activities and their deliverables

K17.4 quality and effectiveness of external providers of system/solution/service design services

K18 Advise and guide others on

K18.1 all aspects of system/solution/service design activities and their deliverables

K18.2 best practice in system/solution/service design

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Developed by	e-skills UK
Version number	1
Date approved	September 2009
Indicative review date	March 2014
Validity	Current
Status	Original
Originating organisation	e-skills UK
Original URN	4076
Relevant occupations	Business Analyst; Information and Communication Technology
Suite	IT and Telecoms
Key words	Logical design; Physical design; Requirements specification