

## Higher National Unit Specification

### General information for centres

**Unit title:** IT Infrastructure: Service Delivery

**Unit code:** F0DY 35

**Unit purpose:** This Unit develops the candidate's knowledge and understanding of the concept of service delivery. The strategy adopted is a process driven approach to be of benefit to the IT operation within both large and small organisations. The approach modularises the functionality of service delivery and utilises the relationship between each of the components. This Unit will benefit individuals working in the field of IT infrastructure including operational personnel, management and supporting consultants.

On completion of the Unit the candidate should be able to:

- 1 Understand the purpose of service level management.
- 2 Understand the rationale of availability management.
- 3 Understand the rationale of capacity management.
- 4 Understand the function of IT service financial management.
- 5 Understand the purpose of IT service continuity management.

**Credit points and level:** 1 HN Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8\*)

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

**Recommended prior knowledge and skills:** Access to this Unit will be at the discretion of the centre, however, it would be beneficial to have previously completed the HN Unit F0E0 34 *IT Infrastructure: Service Support*.

**Core Skills:** There are no opportunities to develop Core Skills in this Unit.

**Context for delivery:** If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

This Unit develops the students' knowledge and understanding of the role of service delivery and its interrelationships with the activities of the IT organisation, its customers and the business. The coherent integration of people, cost, process and technology extends the concept of an infrastructure approach to service delivery.

## General information for centres (cont)

**Assessment:** The assessment from this Unit must combine Outcome 1, 2, 3, 4 and 5 as a holistic assessment. This will consist of 40 questions which must be presented in a random order of equal weight.

The assessment must be undertaken in supervised conditions and is closed-book. A candidate should complete this assessment within a specified time. Candidates may not bring to the assessment event any notes, textbooks, handouts or other material. The questions presented must significantly change on each assessment occasion. Testing can be done in either a machine-based or paper-based format and must be invigilated. There must be no communication between candidates and communication with the invigilator must be restricted to matters relating to the administration of the test.

A candidate must answer at least 60% of the total questions correctly in order to obtain an overall pass. In addition, the candidate must pass each separate Outcome with a threshold of 60%.

If a candidate requires to be reassessed, a significant proportion of different questions must be used from all sections. The questions used in the reassessment must be significantly different from those used in the original test. The assessment conditions of the re-assessment must be the same as the original assessment instrument. Only the required Outcomes should be re-assessed.

This assessment may be produced using e-assessment. This may take the form of e-testing (for knowledge and understanding and/or e-portfolios for practical abilities). There is no requirement to seek prior approval if you wish to use e-assessment for either of these purposes so long as the normal standards for validity and reliability are observed. Please see the following SQA publications for further information on e-assessment:

- 1 SQA Guidelines on Online Assessment for Further Education (March 2003).
- 2 Assessment & Quality Assurance in Open & Distance Learning (Feb. 2001).

If a centre is presenting this assessment on-line the following assessment methods, where appropriate, may be selected:

- ◆ Multiple-choice
- ◆ Drag and drop
- ◆ Multiple response
- ◆ Mix and match
- ◆ A combination of the above

It is expected that the questions will be of the multi-choice variety. Centres may consider the use of alternative question types, particularly if using Computer Assisted Assessment approaches. However, care should be taken that the questions are valid and at an appropriate level. The use of simple true/false question responses is unlikely to achieve this.

## **Higher National Unit specification: statement of standards**

**Unit title:** IT Infrastructure: Service Delivery

**Unit code:** F0DY 35

The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

### **Outcome 1**

Understand the purpose of service level management

#### **Knowledge and/or skills**

- ◆ Scope of service level management
- ◆ Components of service level management
- ◆ Key considerations of service level management

#### **Evidence Requirements**

Candidates will need to demonstrate their knowledge and/or skills by evidencing the following:

- ◆ The scope of service level management: negotiation and agreement of SLAs (Service Level Agreements) between the IT function and stakeholders such as customers, internal departments and external suppliers.
- ◆ The components of service level management: agreeing and reviewing SLAs including cataloguing and quantifying services, establishing SLRs (Service Level Requirements), defining and monitoring targets.
- ◆ The key considerations of service level management: customer focus, organisational impact and continuous improvement and relationships with capacity, availability and finance.

Evidence for all the knowledge and/or skills in this Outcome must be assessed with Outcomes 2, 3, 4 and 5.

#### **Assessment guidelines**

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** IT Infrastructure: Service Delivery

### **Outcome 2**

Understand the rationale of availability management

#### **Knowledge and/or skills**

- ◆ Scope of availability management
- ◆ Components of availability management
- ◆ Key considerations of availability management

#### **Evidence Requirements**

Candidates will need to demonstrate their knowledge and/or skills by evidencing the following:

- ◆ The scope of availability management: ensuring the reliability, availability and security of service where, when and by whom required.
- ◆ The components of availability management: availability plan, measurement benchmark, methods and techniques, reports and audits.
- ◆ The key considerations of availability management: availability, reliability, maintainability, serviceability and security and its relationship with SLM (Service Level Management).

Evidence for all the knowledge and/or skills in this Outcome must be assessed with Outcomes 1, 3, 4 and 5.

#### **Assessment guidelines**

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

### **Outcome 3**

Understand the rationale of capacity management

#### **Knowledge and/or skills**

- ◆ Scope of capacity management
- ◆ Components of capacity management
- ◆ Key considerations of capacity management

#### **Evidence Requirements**

Candidates will need to demonstrate their knowledge and/or skills by evidencing the following:

- ◆ The scope of capacity management: best use of hardware, software, networking equipment, peripherals and people to meet business needs of the customer.
- ◆ The components of capacity management: capacity plan, CDB (Capacity Management database), targets, capacity report, schedules and audits.

## **Higher National Unit specification: statement of standards (cont)**

### **Unit title:** IT Infrastructure: Service Delivery

- ◆ The key considerations of capacity management: future business needs, patterns and trends of utilisation, new services and relationships with SLM (Service Level Management), availability management and finance.

Evidence for all the knowledge and/or skills in this Outcome must be assessed with Outcomes 1, 2, 4 and 5.

#### **Assessment guidelines**

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

### **Outcome 4**

Understand the function of IT service financial management

#### **Knowledge and/or skills**

- ◆ Scope of IT service financial management
- ◆ Components of IT service financial management
- ◆ Key considerations of IT service financial management

#### **Evidence Requirements**

Candidates will need to demonstrate their knowledge and/or skills by evidencing the following:

- ◆ The scope of IT service financial management: financial effectiveness and efficiency within the IT service provision optionally including cost recovery.
- ◆ The components of IT service financial management: investment appraisal, budgeting, accounting and optional charging based on a structured cost model.
- ◆ The key considerations of IT service financial management: charging and pricing, cost elements, direct and indirect costs, impact on user behaviour and the relationships with SLM (Service Level Management) and capacity management.

Evidence for all the knowledge and/or skills in this Outcome must be assessed with Outcomes 1, 2, 3 and 5.

#### **Assessment guidelines**

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

## Higher National Unit specification: statement of standards (cont)

**Unit title:** IT Infrastructure: Service Delivery

### Outcome 5

Understand the purpose of IT service continuity management

#### Knowledge and/or skills

- ◆ Scope of IT service continuity management
- ◆ Components of IT service continuity management
- ◆ Key considerations of IT service continuity management

#### Evidence Requirements

Candidates will need to demonstrate their knowledge and/or skills by evidencing the following:

- ◆ The scope of IT service continuity management: active risk management and reduction through contingency planning for the event of crisis situations, leading to timely and effective recovery of provision.
- ◆ The components of IT service continuity management: impact analysis, risk analysis, recovery options, continuity strategy, standby arrangements and organisational structure.
- ◆ The key considerations of IT service continuity management: business continuity awareness and strategy, 3rd party involvement, standby options and the relationships with SLM (Service Level Management) and availability management.

The assessment from this Outcome must be combined with Outcome 1, 2, 3 and 4 as a holistic assessment. This will consist of 40 questions which will be presented in supervised conditions and is closed-book. These questions must be presented in a random order of equal weight.

The assessment must be undertaken in supervised conditions and is closed-book. A candidate should complete this assessment within a specified time. Candidates may not bring to the assessment event any notes, textbooks, handouts or other material. The questions presented must significantly change on **each** assessment occasion. Testing can be done in either a machine-based or paper-based format and must be invigilated. There must be no communication between candidates and communication with the invigilator must be restricted to matters relating to the administration of the test.

A candidate must answer at least 60% of the total questions correctly in order to obtain an overall pass. In addition, the candidate **must pass each separate** Outcome with a threshold of 60%.

If a candidate requires to be reassessed, a significant proportion of different questions must be used from all sections. The questions used in the reassessment must be significantly different from those used in the original test. The assessment conditions of the re-assessment must be the same as the original assessment instrument.

#### Assessment guidelines

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

## Administrative Information

**Unit code:** F0DY 35

**Unit title:** IT Infrastructure: Service Delivery

**Superclass category:** AG

**Original date of publication:** August 2006

**Version:** 01

### History of Changes:

| Version | Description of change | Date |
|---------|-----------------------|------|
|         |                       |      |
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## **Higher National Unit specification: support notes**

### **Unit title:** IT Infrastructure: Service Delivery

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

### **Guidance on the content and context for this Unit**

This Unit develops the candidate's knowledge and understanding of the concept of service delivery. The strategy adopted is a process driven approach to be of benefit to the IT operation within both large and small organisations. The approach modularises the functionality of service delivery and utilises the relationship between each of the components. This Unit will benefit individuals working in the field of IT infrastructure including operational personnel, management and supporting consultants.

### **Guidance on the delivery and assessment of this Unit**

This Unit in conjunction with HN Unit F0E0 34 *IT Infrastructure: Service Support* forms the PDA certificate in IT Service Management. This certification has been designed to match the learning required to successfully achieve the ITIL (Information Technology Infrastructure Library) Foundation certificate. For further information visit the following website — <http://www.ogc.gov.uk>.

It is recommended that these Units are taught using a holistic approach based on the main components of people, processes and technology working together. This approach can be best demonstrated by using a case study.

Service level management is a defined process that enables the IT function to deliver exactly what is expected of it and to ensure that these services are recognized as beneficial to the business.

The candidate could understand the scope of service level management which involves negotiation and agreement of SLAs (Service Level Agreements) between the IT function and stakeholders such as customers, internal departments and external suppliers. The components of IT service of service level management, including agreeing and reviewing SLAs including cataloguing and quantifying services, establishing SLRs (Service Level Requirements), defining and monitoring targets could be introduced. The candidate could consider the key issues of service level management, covering customer focus, organisational impact and continuous improvement and relationships with capacity, availability and finance.

The singular goal of availability management is to ensure that the customer can use a given IT service at any time.

The candidate could understand the scope of availability management: ensuring the reliability, availability and security of service where, when and by whom required. The components of IT service availability management, including the availability plan, measurement benchmarks, methods and techniques, reports and audits could be introduced. The candidate could consider the key issues, covering availability, reliability, maintainability, serviceability and security and the relationship of availability management with SLM (Service Level Management).



## Higher National Unit specification: support notes (cont)

### Unit title: IT Infrastructure: Service Delivery

Capacity management activities include planning, sizing, and controlling service solution capacity to satisfy user demand within the performance levels set forth in the SLA. The candidate could understand the scope of capacity management, which involves best use of hardware, software, networking equipment, peripherals and people to meet business needs of the customer. The components of IT capacity management, including capacity plan, Capacity Management Database, targets, capacity report, schedules and audits could be introduced. The candidate could consider the key issues of capacity management, covering future business needs, patterns and trends of utilisation, new services and relationships with SLM (Service Level Management), availability management and finance

Financial management ensures that any proposed solution meets the requirements defined in service level management (SLM) and is justified from a cost and budget standpoint. The candidate could understand the scope of IT service financial management, which involves financial effectiveness and efficiency within the IT service provision optionally including cost recovery. The components of IT service financial management, including investment appraisal, budgeting, accounting and optional charging based on a structured cost model could be introduced. The candidate could consider the key issues of IT service financial management, covering charging and pricing, cost elements, direct and indirect costs, impact on user behaviour and the relationships with SLM (Service Level Management) and capacity management.

IT service continuity management focuses on minimizing the disruptions to business caused by the failure of mission-critical systems.

The candidate could understand the scope of IT service continuity management, which involves active risk management and reduction through contingency planning for the event of crisis situations, leading to timely and effective recovery of provision. The components of IT service continuity management including impact analysis, risk analysis, recovery options, continuity strategy, standby arrangements and organisational structure, could be introduced. The candidate could consider the key issues of IT service continuity management, covering business continuity awareness and strategy, 3<sup>rd</sup> party involvement, standby options and the relationships with SLM (Service Level Management) and availability management

The assessment from this Unit will combine Outcome 1, 2, 3, 4 and 5 as a holistic assessment. This will consist of 40 questions will be a representative sample from each Outcome which must be presented in a random order of equal weight.

## Higher National Unit specification: support notes (cont)

**Unit title:** IT Infrastructure: Service Delivery

### ITIL Glossary of Abbreviations

|       |   |
|-------|---|
| BCM   | Business Continuity Model                           |
| BSC   | Balanced Score Card                                 |
| CAB   | Change Advisory Board                               |
| CDB   | Capacity Management Database                        |
| CFIA  | Component Failure Impact Analysis                   |
| CI    | Configuration Items                                 |
| CMDB  | Configuration Management Database                   |
| CMM   | Capability Maturity Model                           |
| CRAMM | Risk Analysis & Management Methodology              |
| CSF   | Critical Success Factors                            |
| DHS   | Definitive Hardware Store                           |
| DSL   | Definitive Software Library                         |
| EFQM  | European Foundation for Quality Management          |
| EXIN  | Exameminstituut voor Informatica (Dutch Foundation) |
| FSC   | Forward Schedule of Change                          |
| HRM   | Human Resource Management                           |
| ISEB  | Information Systems Examination Board               |
| ISO   | International Standards Organisation                |
| IT    | Information Technology                              |
| ITIL  | Information Technology Infrastructure Library       |
| ITSCM | IT Service Continuity Management                    |
| ITSMF | IT Service Management Forum                         |
| KEdb  | Known Error database                                |
| KPI   | Key Performance Indicators                          |
| OGC   | Office of Government Commerce                       |
| OLA   | Operational Level Agreements                        |
| PIR   | Post Implementation Review                          |
| PSA   | Projected Service Availability                      |
| RFC   | Request for Change                                  |
| RFW   | Request For Work                                    |
| SIP   | Service Improvement Programme                       |
| SLA   | Service Level Agreement                             |
| SLR   | Service Level Requirements                          |
| SOR   | Service Outage Analysis                             |
| SPOF  | Single Points Of Failure                            |
| SQP   | Service Quality Plan                                |
| TCO   | Total Cost of Ownership                             |
| TOP   | Technical Observation Post                          |
| UC    | Underpinning Contracts                              |

### *Opportunities for developing Core Skills*

There are no opportunities for developing Core Skills in this Unit.

## **Higher National Unit specification: support notes (cont)**

**Unit title:** IT Infrastructure: Service Delivery

### **Open learning**

This Unit could be delivered by distance learning. However, it would require planning by the centre to ensure the sufficiency and authenticity of candidate evidence. The assessment arrangements outlined above should be suitable for open learning provided regular contact can be maintained with the tutor.

For information on normal open learning arrangements, please refer to the SQA guide *Assessment and Quality Assurance of Open and Distance Learning* (SQA, 2000).

### **Candidates with disabilities and/or additional support needs**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: **[www.sqa.org.uk](http://www.sqa.org.uk)**.

## General information for candidates

### Unit title: IT Infrastructure: Service Delivery

You will be introduced to the scope of service level management which involves negotiation and agreement of SLAs (Service Level Agreements) between the IT function and stakeholders such as customers, internal departments and external suppliers. The components of IT service of service level management, including agreeing and reviewing SLAs including cataloguing and quantifying services, establishing SLRs (Service Level Requirements), defining and monitoring targets could be introduced. You should consider the key issues of service level management, covering customer focus, organisational impact and continuous improvement and relationships with capacity, availability and finance.

You should understand the scope of availability management: ensuring the reliability, availability and security of service where, when and by whom required. You will be introduced to the key issues, covering availability, reliability, maintainability, serviceability and security and the relationship of availability management with SLM (Service Level Management).

The components of IT capacity management, including capacity plan, Capacity Management Database, targets, capacity report, schedules and audits will be introduced. You will consider the key issues of capacity management, covering future business needs, patterns and trends of utilisation, new services and relationships with SLM (Service Level Management), availability management and finance

Financial management ensures that any proposed solution meets the requirements defined in service level management (SLM) and is justified from a cost and budget standpoint. You should understand the scope of IT service financial management, which involves financial effectiveness and efficiency within the IT service provision optionally including cost recovery. You will consider the key issues of IT service financial management, covering charging and pricing, cost elements, direct and indirect costs, impact on user behaviour and the relationships with SLM (Service Level Management) and capacity management.

Introducing the components of IT service continuity management including impact analysis, risk analysis, recovery options, continuity strategy, standby arrangements and organisational structure, could be introduced.

You will discuss the IT service continuity management focuses on minimizing the disruptions to business caused by the failure of mission-critical systems. You should understand the scope of IT service continuity management, which involves active risk management and reduction through contingency planning for the event of crisis situations, leading to timely and effective recovery of provision. The components of IT service continuity management including impact analysis, risk analysis, recovery options, continuity strategy, standby arrangements and organisational structure, could be introduced. You will consider the key issues of IT service continuity management, covering business continuity awareness and strategy, 3<sup>rd</sup> party involvement, standby options and the relationships with SLM (Service Level Management) and availability management.