Unit 26: Enhancing Public Service Delivery Through the Use of ICT

Unit code: L/600/6106

QCF Level 3: BTEC National

Credit value: 10

Guided learning hours: 60

Aim and purpose

The aim of this unit is to develop learners' knowledge of the range of ICT systems used by public service organisations and the legal and security requirements of using ICT. The aim is also to develop learners' understanding of how public services use ICT to support service delivery and the benefits of ICT for public service organisations, their suppliers and customers.

Unit introduction

Effective use of information communication technology (ICT) is at the heart of the operation of public services and government. The Government has invested heavily in the design and implementation of ICT projects both for specific public service organisations and to link the services to improve the standard of service delivery provided to users.

The purpose of this unit is to enable learners to identify the range of ICT used by public service organisations and how ICT supports both those organisations and their suppliers and customers and enhances the delivery of public services in the UK.

Personnel employed by public services are required to use ICT effectively in the day-to-day performance of their roles and to understand both generic and specialist ICT applications. They are expected to communicate internally with other public services and with suppliers and service users using ICT as a key communication medium. Public service personnel are expected to know the legal and security issues surrounding their use of ICT and how to access and use information via ICT.

On completion of this unit learners will be able to identify the range of ICT-based systems being used by public services, central and local government and be able to explain how they are used.

Learners will have a clear knowledge of the legal and security issues surrounding the use of ICT by public services and how those services must manage the use of ICT.

The unit gives learners an understanding of the benefits of ICT to public service organisations, their personnel, suppliers and service users.

Learning outcomes

On completion of this unit a learner should:

1   Know the range of ICT systems used by public service organisations

2   Know the legal and security requirements of the use of ICT by public services

3   Understand how public services use ICT to support service delivery

4   Understand the benefits of ICT for public service organisations, their suppliers and customers.

Unit content

1 Know the range of ICT systems used by public service organisations

Hardware systems: current range of equipment eg mainframe computers, networks, servers, personal computers including input and output devices, satellite mapping and tracking systems

Software systems: generic applications and use across public services, word processing, spreadsheets, presentation software, email, databases, internet access; organisational-specific software eg Police National Computer, DVLA driver and vehicle databases, library resources databases, NHS patient database; other software eg financial packages, payroll, stock control; databases of users and suppliers eg electoral roll; shared public service systems eg Oasys offender records

Monitoring systems: Criminal Records Bureau; CCTV; security to monitor entry and exit in public service, central and local government buildings, car parks; ICT identification systems eg passport scanning systems, iris, palm, fingerprint recognition

Other public services use: eg traffic management, surveillance systems, video-link court hearings; online payments

2 Know the legal and security requirements of the use of ICT by public services

Legal requirements: legal requirements surrounding the use and storage of data, surveillance and privacy; Data Protection Act 1998; Freedom of Information Act 2000; other relevant legislation eg Computer Misuse Act 1990, Human Rights Act 1998, Regulation of Investigatory Powers Act 2000 (RIPA), Telecommunications (Interception of Communications) Regulations 2000 (SI 2000/2699), Data Protection (Processing of Sensitive Personal Data) Order 2000 (SI 2000/2905), Privacy and Electronic Communications (EC Directive) Regulations 2003 (SI 2003/2426); including any subsequent amendments to regulations and legislation

Security requirements: contingency planning; maintenance of secure information communication systems; protection of data from theft, hacking, fraud, breakdown and failure; maintaining security for both public service personnel and service users

3 Understand how public services use ICT to support service delivery

Providing information to suppliers and customers: public internet (web) sites; web addresses on printed information and invoices; public email contact systems; internal intranet; text messaging; VLE (virtual learning environments)

Recording, storing and exchanging information: how public services record and store information about internal and external customers using ICT; scanning and bar codes eg passports and vehicle registrations; databases eg Police National Computer, DVLA records, NHS patient database; exchange of information within public service organisations and between public service organisations

Communicating: with customers and users eg public email contact systems; internal email systems; electronic payment facilities; confirmation of electronic payments; communicating internally and with other public services by exchange of information, partnership working

Managing use of ICT: HR policy; implications; need for internal policy on use/misuse of internet, email, other IT systems, plagiarism; security for users, content filtering, firewalls, encryption, password protected access, virus protection and internet security eg for schools and libraries; managing security breaches

4 Understand the benefits of ICT for public service organisations, their suppliers and customers

Communication systems: within public services, central and local government; intranet; internet; email; websites; mobile phones; inter-agency communication eg police, NHS, local authority; safe systems for confidential information; communication of policies between agencies

Information transfer systems: within central and local government; information services, bill payments; to track payments; to track delivery eg goods, letters; automated enquiry systems; central government initiatives eg identity cards

Benefits of ICT for organisations: setting and monitoring of performance objectives for organisations, departments and individual personnel; facilities management eg heating, air conditioning, lighting, audio-visual aid (AVA) presentation equipment; internal benefits eg payroll, access to supplier and customer database; enhanced internal communication eg email, intranet; enhanced external communications eg email, payments of benefits, managing council tax, managing local provision, website information, managing services through internet and email eg job applications, planning applications

Benefits for public service personnel: access to information remotely eg police access to DVLA car registration details; greater variety of work and division of role between face-to-face contact with customers and electronic contact

Benefits of ICT for suppliers and customers: ordering; bill payment; tracking; enquiries; information; reporting of faults; receiving benefits; accessing services outside working hours eg online payments for TV licences, DVLA road fund licence, VAT

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe the range of ICT systems used by public service organisations [IE]		
P2 outline the legal and security considerations regarding public service organisations' use of ICT	**M1** explain the legal and security considerations regarding the use of ICT for one public service organisation	
P3 identify ways public services provide, record, store, and exchange information using ICT		
P4 illustrate ways public services use ICT in communication		
P5 explain how public services manage the use of ICT	**M2** compare the ways two different public service organisations use ICT to support communication and how they record, store and exchange information [IE3]	**D1** critically evaluate the use of ICT by two named public service organisations [IE4]
P6 illustrate the benefits of ICT for public service organisations, their personnel, suppliers and customers.	**M3** analyse the benefits of ICT for public services, their suppliers and customers.	**D2** assess the benefits of ICT for one named public service organisation.

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Delivery should focus on active and experiential learning and opportunities for learners to research aspects of the content and contribute to classroom discussion, both with their tutor and with appropriate public, private and third sector organisations and their personnel.

Delivery is enhanced where groups of learners take responsibility for researching specific aspects of the unit content (as agreed with the tutor) and presenting their findings to other learners in the peer group using presentation slide shows, posters, leaflets, exhibitions, quizzes and other activity-based approaches. This helps learners to develop the personal, learning and thinking skills (PLTS) which are an essential part of their overall programme, in particular teamworking, independent enquirer and creative thinking skills.

Current examples highlighted in the media and on the internet provide rich (and real) case studies for the development of group-based research and classroom discussion.

ICT systems used by a range of public services should be examined by selecting a range of organisations which learners can visit or in which learners have an interest in working, that have very different ICT systems to support their service provision. Learners do not need to know the range of ICT systems in depth, rather they should explore the breadth of ICT systems in use in the selected organisations. Case studies will be useful in supporting delivery of learning outcome 1.

For learning outcome 2, the security considerations and legislation should be covered in sufficient depth for learners to know the key acts and the main aspects of the need to maintain security of data and information and operate within the law.

For learning outcome 3, learners need to develop a clear understanding of how ICT can support public services in their work, supplying information to suppliers, internal and external customers, using information, communicating with internal and external customers. Learners also need to understand how public services must manage ICT use, putting effective policies and procedures in place to deal with potential breaches of legal and security requirements.

Learning outcome 4, learners need to explore the real benefits which derive from the use of ICT in public service delivery. A case study approach or detailed examination of a number of different public services would support the delivery of this learning outcome.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Tutor introduces the unit and outlines the assessment.
Range of ICT systems used by public service organisations, covering hardware, software, monitoring systems, and organisation specific uses. Tutor input. Internet research on tutor-directed sites. Case study approach. Classroom discussion.
Legal and security considerations regarding public service organisations' use of ICT, providing an overview of the issues involved and the legal framework. Tutor input. Internet research on tutor-directed sites. Case study approach. Classroom discussion.
How public services provide, record, store and exchange information using ICT. Case study approach focusing on three specific and different public services that have different requirements for information management using ICT.
How public services use ICT in communication. Case study approach focusing on three specific and different public services that have different requirements for internal and external communication using ICT.
How public services manage the use of ICT. Case study approach focusing on three specific and different public services and how they actively manage their use of ICT. Links back to the legal and security frameworks.
Assignment 1: ICT Systems and Their Use by Public Services   Includes learner-initiated private study.   **(P1, P2, P3, P4, P5, M1, M2, D1)**
Benefits of ICT for public service organisations, their personnel, suppliers and customers. Tutor input. Internet research on tutor-directed sites. Case study approach. Classroom discussion.
Assignment 2: Benefits of ICT   Includes learner-initiated private study.   **(P6, M3, D2)**
Unit and assessment review.

Assessment

P1 requires learners to describe the range of ICT systems used by public services. It is suggested that learners select two or three public services in which they have an interest, or which they have visited, to address this criterion.

P2 and M1 are linked, and assignment tasks should be written to reflect this. Learners need to outline (and explain for M1) the legal and security considerations for public services and look in detail at the implications for one chosen public service organisation. The legislative context of the use of ICT does not require an in-depth knowledge of the relevant legislation but learners should have a clear overview of the legal requirements applying to both individuals and organisations when they use ICT. Learners should also outline the security issues that an organisation must be aware of when using ICT. Learners should ensure that they cover aspects raised in the unit content.

For P3, learners must identify different ways public services provide, record, store and exchange information using ICT. For P4, learners must illustrate different ways public services use ICT in communication.

M2 extends from P3 and P4 and requires learners to compare how two organisations use ICT in communication and information handling.

P5 requires learners to explain the control mechanisms that must be in place to manage the use of ICT by public service organisations.

P6 requires learners to illustrate the benefits public service organisations, suppliers and customers gain from the use of ICT, focused particularly on communication systems and information transfer systems as identified in the unit content. M3 extends from P6 and requires learners to analyse the benefits identified in P6. For D1, learners are required to evaluate the use of ICT in two named public service organisations with regard to how it supports security and management including the gained benefits.

D2 is an extension of M3, requiring learners to assess the benefits a selected public service organisation gains from the use of ICT

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3, P4, P5, M1, M2, D1	ICT Systems and their Use by Public Services	You have been asked to review the various aspects of the use of ICT by different public service organisations.	Report, presentation, exhibition, interview.
P6, M3, D2	Benefits of ICT	You have been asked to review how public services, their customers and personnel benefit from the use of ICT.	Report, presentation, exhibition, interview.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Public Services sector suite. This unit has particular links with the following unit titles in the Public Services suite:

Level 1	Level 2	Level 3
Public Services Assisting the Public	ICT and the Public Services	Public Service Data Interpretation

Essential resources

Learners need to have access to ICT, including the internet.

Employer engagement and vocational contexts

It is vital that this unit is delivered using a range of case studies and scenarios drawn from real public services and the use they make of ICT. This should include real case studies where, for example, public services have not protected the security of data effectively and the potential impact of that situation. It should also include case studies where the use of ICT has brought a positive benefit to delivery of public services in the UK, such as the electronic tracking of insurance, MOT testing and vehicle licensing for every vehicle registered in the UK.

Delivery of this unit will be greatly enhanced if learners have the opportunity to visit a range of public service organisations and see how they use ICT in their everyday work and in enhancing the delivery of the services they are responsible for. A range of organisations should be selected (for example the local library, a sports or leisure centre, a GP surgery or hospital, a uniformed public service).

Talks from relevant public service personnel are important to highlight real examples of the benefits organisations, their staff and service users have derived from the growing use of ICT in service delivery.

The use of public services website and literature is essential for the unit to be delivered successfully.

Indicative reading for learners

Textbook

Craig D and Brooks R – *Plundering the Public Sector* (Constable and Robinson, 2006) ISBN 9781845293741

Hammond Suddards Edge – *Privacy and Communications, Legal Essentials* (Chartered Institute of Personnel and Development, 2001) ISBN 9780852929421

Lever J – *ICT for Social Welfare: A Toolkit for Managers* (Policy Press, 2004) ISBN 9781861345059

Pfleeger C and Pfleeger S – *Security in Computing* (Pearson, 2006) ISBN 9780132390774

The Stationery Office – *Email and internet: Models, Policies and Clauses* (Stationery Office Books, 2000) ISBN 9780117025059

Journals

Engel D – *Caught by the net*: *avoiding cyberliability Flexible Working* Vol 3, No 4, May 1998, pp15-16

Getting email under control IRS Employment Review No 771, 7 March 2003, pp7-13

Seeley M – *How to make email work for you People Management* Vol 10, No 2, 29 January 2004, pp48-49

British Standards

BS7799-1:2000: Information security management – code of practice

BS7799-2:2002: Information security management – specification for guidance and use

Websites

Advisory Conciliation and Arbitration Service (ACAS) – internet and email policies	www.acas.org.uk/index.aspx?articleid=808
Chartered Institute of Personnel and Development	www.cipd.co.uk
Department for Business, Innovation and Skills	www.berr.gov.uk/whatwedo/sectors/infosec/infosecadvice/legislationpolicystandards/legislation/page33362.html
Directgov	www.direct.gov.uk
Federation Against Software Theft (FAST)	www.fast.org.uk
ICT and public services	www.3s4.org.uk/news/the-impact-of-ict-on-the-design-and-delivery-of-public-services
ICT projects in public services article	www.publicservice.co.uk/feature_story.asp?id=7622
Information Commissioner's Office	www.ico.gov.uk
JANET Acceptable Use Policy	www.ja.net/documents/publications/policy/aup.pdf
Legislation that Applies to the IT Profession	www.sqa.org.uk/e-learning/ITLaw01CD/page_01.htm
Public services and ICT – report	www.theworkfoundation.com/research/publications/publicationdetail.aspx?oItemId=111
Public services portal	www.publicservice.co.uk/
Security of data article	www.publicservice.co.uk/feature_story.asp?id=9335

Delivery of personal, learning and thinking skills

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are …
Independent enquirers	describing the range of ICT systems used by public service organisation.
	comparing the ways different public service organisations use ICT to support communication and the recording, storage and exchange of information
	critically evaluating the use of ICT by named public service organisations
Team workers	working in teams with other learners to access information for class and formal assessments
Self-managers	working on assignment tasks for assessment
Effective participators	contributing to classroom debate and discussion
	contributing to the presentation of their assignment findings.

Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Follow and understand the need for safety and security practices	identifying legal and security considerations of the use of ICT
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	accessing information for class and formal assessments from the internet
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	critically evaluating the use of ICT by two public sector organisations
ICT – Develop, present and communicate information	
Present information in ways that are fit for purpose and audience	presenting assessment tasks using ICT
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	presenting their assignment evidence
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching information and public service organisations
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	presenting their assignment evidence.