FutureQuals
INSPIRING LEARNING AND SKILLS

Level 2 NVQ Diploma In
BUSINESS IMPROVEMENT TECHNIQUES

Qualification Specification

Qualification recognition number: 601/4342/3
Qualification Reference: L2NVQDBIT

www.futurequals.com

Contents

Centre Requirements

1.1 Introduction

Introduction to FutureQuals

FutureQuals is forward thinking, learner and customer-focused, and committed to delivering inspiring learning and skills.

Our Values
"We are a Visionary, Supportive, Innovative and Professional Awarding Organisation that is committed to excellence."

Our Vision
"We envisage a place in which every learner realises their full potential."

Our Mission
"To provide respected and valued qualifications and assessment to enable quality assured learning."

FutureQuals is recognised to deliver regulated qualifications by Ofqual in England, CCEA Regulation in Northern Ireland, the Scottish Qualifications Authority (SQA Accreditation) and Qualifications Wales to offer a comprehensive and diverse range of qualifications across a wide range of vocational areas many of which are transferable across industries and sectors.

A full list of FutureQuals current qualifications can be accessed at http://www.futurequalsquals.com

We have developed a genuine understanding and insight into all types of educational organisations, which ensures that we are highly responsive to their needs. We offer a wide range of benefits and support for our learners, our approved centres, and their assessment and quality assurance teams.

FutureQuals offers a wide range of benefits and support for all of our educational products and services including:

- Vocational qualifications accredited by the UK regulators and recognised by employers, universities and professional bodies
- 24/7 online management systems for the registration of learners, ensuring highly efficient services and access to assessment and results
- A diverse range of qualifications
- A flexible approach to assessment
- A network of professionals who examine and quality assure our regulated qualifications and assessments
- Regular updates on new developments in education and training
- Unrivalled customer service support and extensive guidance materials

Introduction to Qualification Specification

Welcome to the FutureQuals Specification for the **Level 2 NVQ Diploma in Business Improvement Techniques.** The aim of this specification is to provide our centres with guidance to assist in the administration, delivery and assessment of this qualification. It is recommended that you study this specification in detail and become fully conversant with the procedures and accompanying documents.

This specification is a live document and, as such, will be updated when required. Centres will be notified when changes are made. It is the responsibility of the approved centre to ensure the most up to date version of the Approved Specification is in use.

This document is copyright but may be copied by approved centres for the purpose of assessing learners. It may also be copied by learners for their own use.

1.2 Data Protection

FutureQuals is registered with the Data Protection Act and handles all data in accordance with the required procedures of the Act.

1.3 Complaints

FutureQuals aims to constantly monitor the levels of service provided and report on performance indicators on a regular basis. We will endeavour to be open about the levels of service we aim to offer all our customers.

However, if we fall short of expectations or our own standards, we want to give the opportunity for those affected to provide feedback so we can put things right.

Our Complaints Policy, which includes information on how to make a complaint, can be found on the FutureQuals website.

1.4 Enquiries

Any enquires relating to this qualification should be addressed to:

Future (Awards and Qualifications) Ltd
EMP House
Telford Way
Coalville
Leicestershire
LE67 3HE

Tel: 01530 836662
Fax: 01530 836668
E-mail: qualifications@futurequals.com
Website: www.futurequals.com

Qualification Information

2.1 Qualification Outline

Purpose and Aims

The purpose of this Level 2 NVQ Diploma in Business Improvement Techniques is to provide the learner with the skills, knowledge and understanding of business improvement techniques. The learner may already have some knowledge and basic skills in the industry and want to increase their skills and knowledge of the processes involved to improve career prospects, or move on to further study.

The Total Qualification Time (TQT) for this qualification is: 560
Guided Learning (GL) for this qualification is: 249 hours
Minimum credits required to achieve the qualification: 56

Suitable for age ranges: 16-18, 19+

Method of assessment: Portfolio of Evidence. This qualification is internally assessed and internally quality assured by Centre staff and externally quality assured by FutureQuals External Quality Advisors (EQAs).

If the method of assessment includes formative assessments such as practical tasks, written questions, multiple choice/short answer and knowledge assessment tasks where supervision of a learner assessment is required, assessment must be undertaken in line with the requirements set on in the FutureQuals Instructions for Conducting Controlled Assessments Policy. This document is published on the Policies and Procedures section of the FutureQuals website.

Grading: There is no specific grading criteria for this qualification.

Entry guidance: There are no formal qualification entry requirements that a learner must have completed before taking this qualification and no requirement for learners to have prior skills, knowledge or understanding

Exit Requirements: None

2.2 Additional Information

This qualification is regulated by the Office of the Qualifications and Examinations Regulator (Ofqual) in England https://register.ofqual.gov.uk/,Qualifications and CCEA Regulation in Northern Ireland http://ccea.org.uk/regulation.

It may be eligible for public funding as determined by the Department for Education (DfE) under Sections 96 and 97 of the Learning and Skills Act 2000, Qualification Wales and Department of Education in Northern Ireland.

For information regarding potential sources of funding please visit the following websites:

or, contact your local funding office.

You should use the Qualification Accreditation Number (QAN) when you wish to seek public funding for your learners. Each component within a qualification will also have a unique reference number (Component Reference Number), which is listed in this specification. The qualification title and component reference numbers will appear on the learner's final certification document. Learners need to be made aware of this detail when they are recruited by the centre and registered with FutureQuals.

2.3 Progression

The Level 2 Certificate in Business Improvement Techniques has been designed to support progression on to the Level 2 NVQ Diploma in Business Improvement Techniques and the Level 3 Diploma in Business-Improvement Techniques.

2.4 Assessment Principles

The Level 2 Certificate in Business Improvement Techniques must be assessed according to the Assessment Principles.

2.5 Qualification Structure

To achieve the Level 2 NVQ Diploma in Business Improvement Techniques Learners must achieve a minimum of 56 credits. At least 56 of the credits must be achieved at Level 2 or above. Learners must complete all mandatory components in Group M (12 credits) and then select one of the following pathways:

P1 - Process Improvement
Learners must complete all components in Group M1.
Learners can choose to complete a minimum of one component in Group O1 or a minimum of one component in Group O2.

P2- Quality Improvement
Learners must complete all components in Group M2. Learners can choose to complete a minimum of two components in Group O3 or can choose to complete a minimum of one component in Group O3 and a minimum of one component in Group O4.

Group M – Mandatory Components				
Component Number	URN	Component Name	Credit Value	Level
1	A/601/5013	Complying with statutory regulations and organisational safety requirements	5	2
2	J/600/2491	Contributing to effective team working	7	2

Pathway 1 - Process Improvement – Mandatory Components				
Component Number	URN	Component Name	Credit Value	Level
1	L/600/2492	Contributing to the application of workplace organisation techniques	12	2
2	Y/600/2513	Contributing to the application of continuous improvement techniques _Kaizen_	14	2
3	D/600/2514	Contributing to the development of visual management systems	9	2

Pathway 1 - Process Improvement - Optional Components - Group O1			
URN	Component Name	Credit Value	Level
H/600/2515	Contributing to the analysis and selection of parts for improvement	15	2
K/600/2516	Contributing to carrying out lead time analysis	10	2
M/600/2517	Carrying out set-up reduction techniques	15	2
T/600/2518	Carrying out autonomous maintenance	13	2
A/600/2519	Contributing to the application of problem solving techniques	9	2
T/600/2521	Carrying out flow process analysis	14	2
F/600/2523	Contributing to the creation of standard operating procedures _SOP_	9	2

Pathway 1 - Process Improvement - Optional Components - Group O2			
URN	Component Name	Credit Value	Level
J/600/2538	Contributing to the application of Six Sigma methodology to a project	15	2
J/600/2541	Contributing to the application of basic statistical analysis	13	2
Y/600/2544	Contributing to the application of statistical process control _SPC_ procedures	9	2
D/600/2545	Contributing to the application of failure modes and effects analysis _FMEA_	11	2
M/600/2548	Contributing to the application of measurement systems analysis _MSA_	11	2
K/600/2550	Carrying out mistake/error proofing _Poka Yoke_	10	2

	F/600/2540	Contributing to the application of Six Sigma process mapping	14	2

Pathway 2 - Quality Improvement - Mandatory Components				
Component Number	URN	Component Name	Credit Value	Level
1	J/600/2538	Contributing to the application of Six Sigma methodology to a project	15	2
2	F/600/2540	Contributing to the application of Six Sigma process mapping	14	2
3	J/600/2541	Contributing to the application of basic statistical analysis	13	2

Pathway 2 - Quality Improvement - Optional Components - Group O3			
URN	Component Name	Credit Value	Level
Y/600/2544	Contributing to the application of statistical process control _SPC_ procedures	9	2
D/600/2545	Contributing to the application of failure modes and effects analysis _FMEA_	11	2
M/600/2548	Contributing to the application of measurement systems analysis _MSA_	11	2
K/600/2550	Carrying out mistake/error proofing _Poka Yoke_	10	2

Pathway 2 - Quality Improvement - Optional Components - Group O4			
URN	Component Name	Credit Value	Level
L/600/2492	Contributing to the application of workplace organisation techniques	12	2
Y/600/2513	Contributing to the application of continuous improvement techniques _Kaizen_	14	2
D/600/2514	Contributing to the development of visual management systems	9	2
H/600/2515	Contributing to the analysis and selection of parts for improvement	15	2
K/600/2516	Contributing to carrying out lead time analysis	10	2
M/600/2517	Carrying out set-up reduction techniques	15	2
T/600/2518	Carrying out autonomous maintenance	13	2
A/600/2519	Contributing to the application of problem solving techniques	9	2

T/600/2521	Carrying out flow process analysis	14	2
F/600/2523	Contributing to the creation of standard operating procedures _SOP_	9	2

2.6 Barred Components and Exemptions

Components with the same title at different levels, or components with the same content, cannot be combined in the same qualification.

Assessment Principles and Component Specifications

3.1 Assessment Principles

FutureQuals qualifications will always include Assessment Principles whether they have been developed by a Sector Skills Council (SSC) or FutureQuals own.

Introduction
Semta, the Sector Skills Council for the Science Engineering Manufacturing Technologies Sector, has produced this QCF Component Assessment Strategy to:
- assist those undertaking assessment, internal and external quality assurance of occupational competence
- encourage and promote consistent assessment of B-IT NVQ components
- promote cost effective assessment plans

This document also provides definitions for:
- the scope of activities and the characteristics of typical learners undertaking B-IT NVQ components at level 2, 3 and 4
- the qualifications and experience required for Assessors and Verifiers
- the assessment environment and notes on simulation/replication
- access to components

and requirements relating to:
- carrying out assessments
- performance evidence
- assessing knowledge and understanding

The importance and value in which employers and learners place on undertaking B-IT NVQ components
will provide a key measure of Semta's success with this component assessment strategy. Another key

Learners Undertaking Level 2, 3 and 4 QCF NVQ Components
The Business-Improvement Techniques NVQ components at Level 2 have been designed for those learners who are making a contribution to the identification and implementation of business improvements such as:
- employees involved in business improvement within a team who wish to have their business improvement competencies assessed for certification purposes
- new employees who have undertaken business improvement training and are now acquiring experience within a team and wish to demonstrate their competencies for assessment purposes

The Business-Improvement Techniques NVQ components at Level 3 have been designed for those learners who will be applying business improvement activities where they are:
- employed as supervisors, team leaders or facilitators and are responsible for carrying out business improvement activities

- people who through Continuous Professional Development are being prepared to take on staff responsibilities in a Business Improvement environment

The Business-Improvement Techniques NVQ components at Level 4 have been designed for those learners who will be leading/managing business improvement projects and where applicable carrying out business improvement activities where they are:

- employed as managers, supervisors, team leaders or facilitators that have overall responsibility for leading/managing business improvement projects
- people who through Continuous Professional Development are being prepared to take on

For further information please refer to: http://www.semta.org.uk/pdf/Business-Improvement-Techniques-(B-IT)-NVQ-Level-2-3-and-4.pdf

3.2 Component Specifications

Component 1: Complying with statutory regulations and organisational safety requirements

Component Reference Number: A/601/5013

Level: 2
Credit: 5
GL: 35

Component Summary
This component covers the skills and knowledge needed to prove the competences required to deal with statutory regulations and organisational safety requirements. It does not deal with specific safety regulations or detailed requirements, it does, however, cover the more general health and safety requirements that apply to working in an industrial environment.

Assessment Guidance
This component must be assessed in a work environment and must be assessed in accordance with the assessment requirements published by Semta.

Relationship to Occupational Standards
This component has been derived from national occupational standard Business-Improvement Techniques Component No. 01: Complying with statutory regulations and organisational safety requirements (Suite 3).

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Comply with statutory regulations and organisational safety requirements	1.1 Comply with their duties and obligations as defined in the Health and Safety at Work Act
	1.2 Demonstrate their understanding of their duties and obligations to health and safety by: • applying in principle their duties and responsibilities as an individual under the Health and Safety at Work Act • identifying, within their organisation, appropriate sources of information and guidance on health and safety issues, such as: - eye protection and personal protective equipment (PPE) - COSHH regulations - Risk assessments • identifying the warning signs and labels of the main groups of hazardous or dangerous substances • complying with the appropriate statutory regulations at all times
	1.3 Present themselves in the workplace suitably prepared for the activities to be undertaken

	1.4 Follow organisational accident and emergency procedures
	1.5 Comply with emergency requirements, to include: • identifying the appropriate qualified first aiders and the location of first aid facilities • identifying the procedures to be followed in the event of injury to themselves or others • following organisational procedures in the event of fire and the evacuation of premises • identifying the procedures to be followed in the event of dangerous occurrences or hazardous malfunctions of equipment
	1.6 Recognise and control hazards in the workplace
	1.7 Identify the hazards and risks that are associated with the following: • their working environment • the equipment that they use • materials and substances (where appropriate) that they use • working practices that do not follow laid-down procedures
	1.8 Use correct manual lifting and carrying techniques
	1.9 Demonstrate one of the following methods of manual lifting and carrying: • lifting alone • with assistance of others • with mechanical assistance
	1.10 Apply safe working practices and procedures to include: • maintaining a tidy workplace, with exits and gangways free from obstruction • using equipment safely and only for the purpose intended • observing organisational safety rules, signs and hazard warnings • taking measures to protect others from any harm resulting from the work that they are carrying out
2 Know how to comply with statutory regulations and organisational safety requirements	2.1 Describe the roles and responsibilities of themselves and others under the Health and Safety at Work Act, and other current legislation (such as The Management of Health and Safety at Work Regulations, Workplace Health and Safety and Welfare Regulations,

	Personal Protective Equipment at Work Regulations, Manual Handling Operations Regulations, Provision and Use of Work Equipment Regulations, Display Screen at Work Regulations, Reporting of Injuries, Diseases and Dangerous Occurrences Regulations)
	2.2 Describe the specific regulations and safe working practices and procedures that apply to their work activities
	2.3 Describe the warning signs for the seven main groups of hazardous substances defined by Classification, Packaging and Labelling of Dangerous Substances Regulations
	2.4 Explain how to locate relevant health and safety information for their tasks, and the sources of expert assistance when help is needed
	2.5 Explain what constitutes a hazard in the workplace (such as moving parts of machinery, electricity, slippery and uneven surfaces, poorly placed equipment, dust and fumes, handling and transporting, contaminants and irritants, material ejection, fire, working at height, environment, pressure/stored energy systems, volatile, flammable or toxic materials, unshielded processes, working in confined spaces)
	2.6 Describe their responsibilities for identifying and dealing with hazards and reducing risks in the workplace
	2.7 Describe the risks associated with their working environment (such as the tools, materials and equipment that they use, spillages of oil, chemicals and other substances, not reporting accidental breakages of tools or equipment and not following laid-down working practices and procedures)
	2.8 Describe the processes and procedures that are used to identify and rate the level of risk (such as safety inspections, the use of hazard checklists, carrying out risk assessments, COSHH assessments)
	2.9 Describe the first aid facilities that exist within their work area and within the organisation in general; the procedures to be followed in the case of accidents involving injury
	2.10 Explain what constitute dangerous occurrences and hazardous malfunctions, and why these must be reported even if no-one is injured

	2.11 Describe the procedures for sounding the emergency alarms, evacuation procedures and escape routes to be used, and the need to report their presence at the appropriate assembly point
	2.12 Describe the organisational policy with regard to fire fighting procedures; the common causes of fire and what they can do to help prevent them
	2.13 Describe the protective clothing and equipment that is available for their areas of activity
	2.14 Explain how to safely lift and carry loads, and the manual and mechanical aids available
	2.15 Explain how to prepare and maintain safe working areas; the standards and procedures to ensure good housekeeping
	2.16 Describe the importance of safe storage of tools, equipment, materials and products
	2.17 Describe the extent of their own authority, and to whom they should report in the event of problems that they cannot resolve

Component 2: Contributing to effective team working

Level: 2
Credit: 7
GL: 26

Component Summary
This component covers the skills and knowledge needed to prove the competences required to work effectively as a team member within a continuous improvement environment. The learner will be required to establish and maintain productive working relationships whilst challenging fixed ideas, and to deal with disagreements in an amicable and constructive way.

Assessment Guidance
This component must be assessed in accordance with the assessment requirements published by Semta.
Specific component requirements:
The word 'contribute' is used within this component. This means that, although the outcomes of this component may be carried out and achieved as part of a team, in order to prove consistent competent performance the learner must be able to demonstrate:
• specific, quantifiable and auditable personal contributions in the achievement of this component
• competences in all the areas required by the component
• their ability to combine the assessment criteria specified when contributing to the application of the principles and processes of this component

Relationship to Occupational Standards
This component has been derived from national occupational standard Business-Improvement Techniques Component No. 02: Contributing to effective team working (Suite 2).

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Contribute to effective team working	1.1 Establish and maintain productive working relationships, using the key performance measures and communication processes available to them
	1.2 Establish and maintain good working relationships with three of the following: • colleagues within their own workgroup • colleagues in other workgroups • immediate line management • those for whom they have responsibility • external contacts
	1.3 Deal with disagreements in an amicable and constructive way, using relevant information and data to support views and arguments
	1.4 Provide ideas and solutions to find ways of resolving issues that cause concern and disagreement

	1.5 Use all relevant information available to them to keep others informed about work plans or activities which affect them
	1.6 Communicate orally by three of the following: • question and answer sessions • team briefings • brainstorming sessions • problem resolution processes
	1.7 Communicate in writing and/or electronically, to include three from the following: • maintaining up-to-date key performance indicators for the work area • adding ideas and actions to team boards • processing information • communicating via e-mail/internal network services • producing briefs or updates
	1.8 Seek assistance from others in a polite, courteous way, without disturbing normal work activities
	1.9 Respond in a timely and positive way, using data and information available when others ask for help or information
2 Know how to contribute to effective team working	2.1 Describe the importance of creating and maintaining effective working relationships
	2.2 Describe the types of problem that can occur with working relationships
	2.3 Explain how their own behaviour, dress and language can affect working relationships
	2.4 Describe the actions that can be taken to deal with specific difficulties in working relationships
	2.5 Describe the importance of challenging fixed ideas within the team
	2.6 Explain how to challenge fixed ideas without causing problems with working relationships
	2.7 Explain how to use data and information to help resolve concerns and disagreements
	2.8 Describe from whom they should seek assistance when they have difficulties with working relationships
	2.9 Describe the importance of sharing their knowledge, information and performance measures with other people in their team and with other groups

	2.10 Explain how to use the data and information available to them to communicate their performance effectively to others
	2.11 Describe the types of information and data available in their area (such as key performance measures for RFT, quality, target versus actual, scrap, OEE, SPC)
	2.12 Describe the use of problem resolution processes and action planning; continuous improvement, brainstorming and the trialling of new ideas
	2.13 Describe the mixture of skills and experience available in their team to support them or the process when problems occur (team skills matrix)
	2.14 Explain why they need to keep others involved in any plans or activities that they may be doing
	2.15 Describe the types of support or assistance that they might need from others
	2.16 Describe the importance of being polite when requesting assistance
	2.17 Describe the types of disruption that can be caused by inopportune requests for assistance
	2.18 Describe the methods used in their area for effective communication (such as team briefings covering team performance, quality, cost, delivery, people; team boards for general information; process performance boards covering measures, graphs, action plans)
	2.19 Describe the extent of their own authority, and to whom they should report in the event of problems that they cannot resolve

Component 1: Contributing to the application of workplace organisation techniques

Level: 2
Credit: 12
GL: 51

Component Summary
This component covers the skills and knowledge needed to prove the competences required to carry out a systemic approach to continuously make improvements to workplace organisation. It involves carrying out the principles and techniques of a workplace organisation activity such as 5S or 5C.

Assessment Guidance
This component must be assessed in accordance with the assessment requirements published by Semta.
Specific component requirements:
The word 'contribute' is used within this component. This means that, although the outcomes of this component may be carried out and achieved as part of a team, in order to prove consistent competent performance the learner must be able to demonstrate:
• specific, quantifiable and auditable personal contributions in the achievement of this component
• competences in all the areas required by the component
• their ability to combine the assessment criteria specified when contributing to the application of the principles and processes of this component

Relationship to Occupational Standards
This component has been derived from national occupational standard Business-Improvement Techniques Component No. 03: Contributing to the application of workplace organisation techniques (Suite 2).

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Contribute to the application of workplace organisation techniques	1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines
	1.2 Use workplace organisation techniques within the chosen work area and establish and agree the area score
	1.3 Identify where information, resources or equipment is missing or is in surplus and where improvements can be made
	1.4 Make recommendations for the creation of, or changes to, standard operating procedures (SOPs), and visual controls that everyone works to within the area
	1.5 Recommend the creation of or changes to standard operating procedures which cover two of the following: • cleaning of equipment/work area • maintenance of equipment

	• health and safety • process procedures • manufacturing operations/working processes • quality systems • regulatory compliance system
	1.6 Recommend the creation of changes to visual controls, which cover two of the following: • shadow boards or an alternative (such a labelled racking and storage systems), to standardise the storage and location of area resources and/or equipment • colour coding • line status systems (such as line process system) • skills matrix • performance measures • process control boards • improvement systems • planning systems
	1.7 Make agreed improvements to the workplace organisation and establish and agree the new improved area score
2 Know how to contribute to the application of workplace organisation techniques	2.1 Describe the health and safety requirements of the area in which they are carrying out the workplace organisation activity
	2.2 Describe the factors to be considered when selecting a work area for an activity (such as: cleanliness, health and safety product quality)
	2.3 Describe the procedure used to identify and address surplus or missing equipment or resources (such as carrying out a 'red tagging' exercise)
	2.4 Explain how to arrange and label the necessary resources or equipment for rapid identification and access
	2.5 Explain how to make recommendations for the creation of, or changes to, standard operating procedures (SOPs) or other approved documentation
	2.6 Explain how to score and audit the workplace organisation
	2.7 Describe the techniques required to communicate information using visual systems (such as shadow boards, performance charts, KPIs)

	2.8 Describe the extent of their own authority, and to whom they should report to, in the event of problems that they cannot resolve

Component 2: Contributing to the application of continuous improvement techniques _Kaizen_

Level: 2
Credit: 14
GL: 55

Component Summary
This component covers the skills and knowledge needed to prove the competences required for contributing to the carrying out of continuous improvement techniques (Kaizen) to the learners work activities. It involves contributing to the planning the Kaizen process for the agreed work area/activity, to include plan, do, check, act, and to use quantifiable objectives and targets for the improvement activity. The activities undertaken will include the identification of all forms of waste, and problems or conditions within the work area or activity where improvements can be made.

Assessment Guidance
This component must be assessed in accordance with the assessment requirements published by Semta.
Specific component requirements:
The word 'contribute' is used within this component. This means that, although the outcomes of this component may be carried out and achieved as part of a team, in order to prove consistent competent performance the learner must be able to demonstrate:
• specific, quantifiable and auditable personal contributions in the achievement of this component
• competences in all the areas required by the component
• their ability to combine the assessment criteria specified when contributing to the application of the principles and processes of this component

Relationship to Occupational Standards
This component has been derived from national occupational standard Business-Improvement Techniques Component No. 04: Contributing to the application of continuous improvement techniques (Kaizen) (Suite 2).

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Contribute to the application of continuous improvement techniques (Kaizen)	1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines
	1.2 Plan the Kaizen process for the agreed work area/activity to include plan, do, check, act
	1.3 Use the established objectives and targets for the Kaizen activity
	1.4 Carry out the Kaizen activity within the chosen work area/activity
	1.5 Identify waste, problems or conditions within the work area or activity where improvements can be made
	1.6 Identify improvements which cover three of the following: • reduction in cost • improved health and safety and/or working environment

	• improved quality • improved regulatory compliance • improvements to working practices • reduction in lead time • reduction in waste and/or energy usage • improved customer service • improved resource utilisation
	1.7 Carry out a structured waste elimination activity, based on the identified wastes, problems or conditions
	1.8 Make recommendations for the creation or changes to standard operating procedures (SOP's) or other approved documentation that will sustain the improvement made, resulting from the Kaizen activity
	1.9 Identify and apply improvements, which cover two of the following: • cleaning of equipment or work area • maintenance of equipment • health and safety • process procedures • manufacturing operations or work area operations • quality system • regulatory compliance systems
	1.10 Use the determined measure of performance for quality, cost and delivery
	1.11 Provide comparisons of the agreed work area/activity before and after the kaizen activity (to confirm improvements) using key performance indicators
	1.12 Record and show business improvement, using one of the following key performance indicators: • not right first time (as a percentage or as parts per million (PPM)) • company-specific quality measure • delivery schedule achievement • company-specific delivery measure • parts per operator hour (PPOH) • production volume • value added per person (VAPP) • overall equipment effectiveness (OEE) • stock turns • floor space utilisation (FSU) • cost breakdown (such as labour, material, energy and overhead) • company-specific cost measure

2 Know how to contribute to the application of continuous improvement techniques (Kaizen)	2.1 Describe the health and safety requirements of the area in which they are carrying out the Kaizen activity
	2.2 Explain how a work area/activity is selected for the Kaizen activity
	2.3 Describe the principles for the deployment of Kaizen (such as where a culture focuses on sustained continuous improvement, aiming at eliminating waste in all systems and processes in the organisation and supply chain)
	2.4 Describe the eight wastes (over-production, inventory, transport, over-processing, waiting time, operator motion, bad quality, failure to exploit human potential) and how to eliminate them
	2.5 Describe problem solving and root cause analysis
	2.6 Describe the importance of fully understanding the process/activity under review, and how this will affect the quality of the problem solving
	2.7 Describe the application of the Deming cycle (plan, do, check, act)
	2.8 Explain how to carry out a Kaizen activity and establish measurable improvements
	2.9 Explain how to distinguish facts from opinions, in order to identify improvement actions
	2.10 Explain how improvements to the process are achieved by engaging the knowledge and experience of the people involved in the process
	2.11 Explain how to encourage people to identify potential improvements
	2.12 Explain how to evaluate improvement ideas, in order to select those that are to be pursued
	2.13 Explain how quantifiable targets and objectives are set
	2.14 Explain how to make recommendations for the creation of changes to standard operating procedures (SOPs) or other approved documentation
	2.15 Describe the techniques used to visually communicate the work of the Kaizen activity to participants and others
	2.16 Describe the application of the business' key measures of competitiveness (such as the former DTI's seven measures: delivered right first time, delivery schedule achievement, people productivity, stock turns, overall

	equipment effectiveness, value added per person, floor space utilisation)
	2.17 Explain how the cycle time of a process can be defined
	2.18 Describe the techniques used to distribute work content to balance cycle times to the rate of customer demand, and how to visually represent it (e.g. line balance and process displays)
	2.19 Describe the extent of their own authority, and to whom they should report in the event of problems that they cannot resolve

Component 3: Contributing to the development of visual management systems

Level: 2
Credit: 9
GL: 41

Component Summary
This component covers the skills and knowledge needed to prove the competences required for contributing to the introduction and use of information used in visual management systems. It involves identifying the appropriate parts of the process or work area that will have visual controls and identifying the key performance indicators which are to be displayed in the work area.

Assessment Guidance
This component must be assessed in accordance with the assessment requirements published by Semta.
Specific component requirements:
The word 'contribute' is used within this component. This means that, although the outcomes of this component may be carried out and achieved as part of a team, in order to prove consistent competent performance the learner must be able to demonstrate:
• specific, quantifiable and auditable personal contributions in the achievement of this component
• competences in all the areas required by the component
• their ability to combine the assessment criteria specified when contributing to the application of the principles and processes of this component

Relationship to Occupational Standards
This component has been derived from national occupational standard Business-Improvement Techniques Component No. 05: Contributing to the development of visual management systems (Suite 2).

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Contribute to the development of visual management systems	1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines
	1.2 Identify appropriate parts of the process or work area that will have visual controls
	1.3 Identify the key performance indicators that will be displayed in the work area
	1.4 Make recommendations for the production of, or changes to, standard operating procedures (SOPs), and visual controls that everyone works to within the area
	1.5 Contribute to the development of visual management systems that promote four of the following: • health and safety • quality/zero defects • process concerns or corrective actions • performance measures

	• standard operating procedures • workplace organisation • skills matrices • autonomous maintenance worksheets • parts/material control systems • problem resolution (e.g. Kaizen boards) • shadow boards • standard work-in-progress (WIP) locations and quantities • planning systems • the delivery of effective meetings
	1.6 Ensure the accuracy of the information submitted for visual managements systems meets with the company requirements
2 Know how to contribute to the development of visual management systems	2.1 Describe the health and safety requirements of the work area in which they are conducting the visual management activities
	2.2 Describe the factors to be considered when selecting a visual management system
	2.3 Describe the visual management systems available to create 'the visual factory' (such as using Kanban systems, card systems, colour coding, floor footprints, graphs, team boards)
	2.4 Describe the measures of performance in a lean business environment (such as health, safety and the environment, right first time, cost, delivery, responsiveness, process concerns and corrective actions, performance measures, workplace organisation)
	2.5 Describe the measurement techniques required for communicating the visual management within an area and to others who may use the information (such as target versus actual, % right first time, Pareto analysis, bar charting, action plans, Paynter charts)
	2.6 Describe the extent of their own authority, and to whom they should report in the event of problems that they cannot resolve

Component 1: Contributing to the application of Six Sigma methodology to a project

Level: 2
Credit: 15
GL: 59

Component Summary

This component covers the skills and knowledge needed to prove the competences required for contributing to the application of a structured Six Sigma methodology to a project. It involves contributing to the identification of the Six Sigma organisational infrastructure, roles and responsibilities and business-specific metrics that will apply. These will include financial, quality and process aspects of the project.

Assessment Guidance

This component must be assessed in accordance with the assessment requirements published by Semta.
Specific component requirements:
The word 'contribute' is used within this component. This means that, although the outcomes of this component may be carried out and achieved as part of a team, in order to prove consistent competent performance the learner must be able to demonstrate:
• specific, quantifiable and auditable personal contributions in the achievement of this component
• competences in all the areas required by the component
• their ability to combine the assessment criteria specified when contributing to the application of the principles and processes of this component

Relationship to Occupational Standards

This component has been derived from national occupational standard Business-Improvement Techniques Component No. 13: Contributing to the application of Six Sigma methodology to a project (Suite 2).

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Contribute to the application of Six Sigma methodology to a project	1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines
	1.2 Contribute to applying the structured Six Sigma methodology and approach to the selected project
	1.3 Contribute in Six Sigma projects which cover two the following: • manufacturing • quality level • administration
	1.4 Contribute to utilising the five phases of Six Sigma within the project: • define • measure

	• analyse • improve • control
	1.5 Contribute to identifying the Six Sigma organisational infrastructure, roles and responsibilities and business-specific metrics that would apply
	1.6 Contribute to producing a diagram (family tree) of the Six Sigma organisational infrastructure and the roles of the following: • Champion • Mentor • Yellow Belt • Green Belt • Black Belt • Master Black Belt
	1.7 Contribute to producing a metric chart for the Six Sigma projects undertaken, to include: • financial • quality • process
	1.8 Contribute to identifying areas where the Six Sigma tools, techniques and activities can be applied
	1.9 Contribute to identifying the Critical To Quality Characteristic (CTQC) of the projects, to include: • cost • quality • delivery
	1.10 Contribute to the identification of the cost of poor quality, by identifying the defects per million opportunities (DPMO)
	1.11 Contribute to relating defects per million opportunities to the sigma score and identifying the gap to Six Sigma performance
2 Know how to contribute to the application of Six Sigma methodology to a project	2.1 Describe the Six Sigma methodology and how it is applied to a project
	2.2 Describe the Six Sigma infrastructure of the business
	2.3 Describe the benefits that could arise from a Six Sigma project
	2.4 Describe the parts per million opportunities goal of Six Sigma
	2.5 Describe the calculation of defects per million opportunities
	2.6 Describe the five phases of Six Sigma that are applied to a project
	2.7 Explain how to define a Critical to Quality Characteristic (CTQC)

	2.8 Explain how non-value added activity can serve as a 'roadblock' to achieving zero defect
	2.9 Explain how to identify an 'Opportunity for Defect'
	2.10 Describe the different roles of the key people in the Six Sigma process (Champion, Mentor, Master Black Belt, Black Belt, Green Belt and Yellow Belt)
	2.11 Describe the relationship between key process input variables and key process output variables
	2.12 Describe the extent of their own authority, and to whom they should report in the event of problems that they cannot resolve

Component 2: Contributing to the application of Six Sigma process mapping

Level: 2
Credit: 14
GL: 55

Component Summary
This component covers the skills and knowledge needed to prove the competences required for contributing to the application of a structured Six Sigma methodology to a project. It involves contributing to the identification of the Six Sigma organisational infrastructure, roles and responsibilities and business-specific metrics that will apply. These will include financial, quality and process aspects of the project.

Assessment Guidance
This component must be assessed in accordance with the assessment requirements published by Semta.
Specific component requirements:
The word 'contribute' is used within this component. This means that, although the outcomes of this component may be carried out and achieved as part of a team, in order to prove consistent competent performance the learner must be able to demonstrate:
• specific, quantifiable and auditable personal contributions in the achievement of this component
• competences in all the areas required by the component
• their ability to combine the assessment criteria specified when contributing to the application of the principles and processes of this component

Relationship to Occupational Standards
This component has been derived from national occupational standard Business-Improvement Techniques Component No. 14: Contributing to the application of Six Sigma process mapping (Suite 2).

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Contribute to the application of Six Sigma process mapping	1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines
	1.2 Contribute to the selection of a suitable process on which to carry out the process mapping activity
	1.3 Contribute to identifying the key stages that form the overall process under investigation
	1.4 Contribute to the collection of data necessary to construct the Six Sigma process map
	1.5 Contribute to the construction of the process map for the Six Sigma project
	1.6 Contribute to the production of a process map, which identifies both: • the key process input variables

	• the key process output variables
	1.7 Contribute to the classification of both the key process input variables and the key process output variables, as one or more of the following: • controllable • critical • noise • standard operating procedure
	1.8 Contribute to the identification of value added and non-value added steps in a process
	1.9 Contribute to identifying improvements to the process, as a result of the information gathered in the Six Sigma mapping activity
	1.10 Contribute to the identification and adding to the process map, the specifications of both: • key process input variables • key process output variables
2 Know how to contribute to the application of Six Sigma process mapping	2.1 Describe the health and safety requirements of the area in which they are carrying out the process mapping activity
	2.2 Describe the benefits of carrying out Six Sigma process mapping
	2.3 Explain how to define a Six Sigma process map
	2.4 Explain how the Six Sigma process map fits within a Six Sigma project
	2.5 Describe the meanings of key process input variables and the key process output variables
	2.6 Describe the data collection point for the key process input variables and the key process output variables (such as gauges, forms and samples)
	2.7 Explain what the main types of key process input variables and the key process output variables are in terms of being controllable, critical, noise, or standard operating procedures
	2.8 Describe the people who should create a Six Sigma process map
	2.9 Describe the difference between a value added activity and a non-value added activity
	2.10 Describe the roles of individuals within a process mapping team
	2.11 Describe the extent of their own authority within the project, and to whom they should report in the event of problems that they cannot resolve

Component 3: Contributing to the application of basic statistical analysis

Level: 2
Credit: 13
GL: 52

Component Summary
This component covers the skills and knowledge needed to prove the competences required for contributing to basic statistical analysis by consulting with the appropriate people and gathering the relevant data for statistical analysis on a Six Sigma project. The learner will need to contribute to using the data gathered to produce descriptive statistics, which cover mean, median, mode, standard deviation, range and variance for the selected representative sample.

Assessment Guidance
This component must be assessed in accordance with the assessment requirements published by Semta.
Specific component requirements:
The word 'contribute' is used within this component. This means that, although the outcomes of this component may be carried out and achieved as part of a team, in order to prove consistent competent performance the learner must be able to demonstrate:
• specific, quantifiable and auditable personal contributions in the achievement of this component
• competences in all the areas required by the component
• their ability to combine the assessment criteria specified when contributing to the application of the principles and processes of this component

Relationship to Occupational Standards
This component has been derived from national occupational standard Business-Improvement Techniques Component No. 15: Contributing to the application of basic statistical analysis (Suite 2).

Learning Outcome - The learner will:	Assessment Criterion - The learner can:
1 Contribute to the application of basic statistical analysis	1.1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines
	1.2 Consult with appropriate people and contribute to gathering the relevant data for statistical analysis
	1.3 Contribute to the production of data gathering forms or charts to gather information, to enable statistical and graphical analysis to take place
	1.4 Contribute to the recording of collected data, utilising two of the following methods: • bar charts • histograms • Pareto diagrams • stem and leaf diagrams • box plots • time series charts

	1.5 Contribute to statistical and graphical analysis on a Six Sigma project
L2NVQDBIT_V1_10/11/2017	1.6 Contribute to the production of descriptive statistics of data, to include: • mean • median • mode • standard deviation • range and variance
	1.7 Contribute to the production of a normal distribution, to assess a population from the representative sample
	1.8 Contribute to the interpretation of the statistical data collected, in order to validate the pre-determined courses of action
	1.9 Contribute to the production of an action plan, as a result of the statistical and graphical analysis undertaken
2 Know how to contribute to the application of basic statistical analysis	2.1 Describe the health and safety requirements of the area in which they are collecting data
	2.2 Describe the meaning of the term 'variation'
	2.3 Explain why a number of data points are needed to draw a statistically valid conclusion
	2.4 Explain why we need to use basic statistics
	2.5 Explain what is meant by the terms 'population' and 'sample' when applied to basic statistics
	2.6 Describe distribution curves and the properties of a normal curve
	2.7 Explain how to use charts and diagrams (such as bar charts, histograms, box plots, time series charts, Pareto diagrams, stem and leaf diagrams)
	2.8 Explain how to calculate mean, median, mode, standard deviation, range and variance
	2.9 Describe the difference between descriptive and inferential statistics
	2.10 Describe the extent of their own authority within the project, and to whom they should report in the event of problems that they cannot resolve

Section Four

Centre Information

4.1 Centre Operations Manual

Information regarding centre support, learner registration, certification, reasonable adjustments and special consideration, complaints and appeals can be found in the Centre Operations Manual.

4.2 Initial Assessment and Centre Learner Support

It is important that centres carry out an initial assessment to identify what knowledge and degree of skills the learner already has, and to identify if any support or reasonable adjustments will be required to enable them to be assessed fairly. This should include an assessment of minimum core personal skills in English, Mathematics and ICT.

This should be recorded so that centres can identify any associated needs and record this in appropriate plans. This will help in planning the learning programme. It is important at the initial assessment stage to ensure that learners commence a programme at the appropriate level.

Centres should assess each learner's potential and make a professional judgement about his/her ability to successfully complete the programme of study and achieve the qualification.

This assessment will need to take account of:

- the support available to the learner within the centre during his/her programme of study
- any specific support that might be necessary to allow the learner to access the assessment for the qualification
- diagnoses of the requirements of the learner, making use of specialist advice from external sources, as appropriate

Centres should identify any learner requirements and how they may affect successful completion of the particular programme. Programme teams should refer closely to the qualification specifications when discussing possible options for learners. They should advise learners on the appropriateness of the qualification to the learner and identify more suitable qualifications if necessary.

It is our intention that there should be no discrimination on the grounds of a protected characteristic. FutureQuals and approved centres have a responsibility to ensure that the process of assessment is robust and fair and allows a learner to show what they know and can do without compromising the assessment criteria.

Details on how to make adjustments for learners to ensure fair access to assessment is set out in the FutureQuals Reasonable Adjustment and Special Considerations Policy.

4.3 Identification Requirements and Learner Authenticity

Identification Requirements

It is a centre's responsibility to confirm the identity of a learner as part of its registration process. A centre may do this by requesting sufficient personal data and a unique learner number (ULN) to ensure the learner can be clearly and uniquely identified.

The use of a ULN is now a mandatory requirement for publicly funded education and when submitting Individualised Learner Record (ILR) returns.

Centres must have systems in place to ensure that an individual completing an assessment is the person he/she is claiming to be.

Therefore, centres are required to ensure that each learner's identification is checked and that the type of identification provided by each learner is recorded before assessments are undertaken. FutureQuals External Quality Assurers will check this record during quality assurance monitoring activities.

The following would be permitted proof of a learner's Identity:

- a valid passport (any nationality)
- a signed UK photo card driving licence
- valid warrant card issued by HM Forces or the Police
- other photographic ID card, e.g. employee ID card (must be current employer), student ID card, travel card
- UK biometric residence permit

If an assessment is taking place in a learner's place of work and a learner is unable to supply any of the above, authentication of a learner's identity by a third-party representative, for example his/her line manager or a member of his/her workplace Human Resources Team can be accepted.

Learner Authenticity

It is a regulatory requirement that every assessment submission is authenticated as the work of the named learner whether submitted to a centre or to FutureQuals. Therefore, the FutureQuals Evidence Logbook requires that a declaration of authenticity is signed by a learner for each assessment submitted.

By signing the declaration, a learner is acknowledging that if the statement is untrue, an assessment breach has been committed.

If a centre uses electronic systems or e-portfolios, an alternate form of formal declaration of authenticity must be completed with each assessment that is submitted.

If a centre uses its own version of the FutureQuals Evidence Logbook it must ensure that the version used captures the same information i.e. the assessment method, evidence reference, the assessor's decision (including the signature and date to evidence completion assessment) and the learner's declaration of authenticity.

Any submission that does not carry a formal declaration of authenticity will not be externally quality assured. If an alternate formal declaration of authenticity is completed by a learner it must, as a minimum, include the statement:

Statement of confirmation of authenticity

I declare that the work presented for this component is entirely my own work.

The learner must sign and date the declaration.

4.4 Legal Considerations

Learners and centres should be aware of regulations affecting those who deal with children, young people and vulnerable adults in the country the qualification is delivered in.

The Prevent Duty Guidance available from the Home Office, makes clear the important role of further education leaders in stopping extremists seeking to radicalise learners on campuses and in supporting learners at risk of extremist influences.

Ofsted has responsibility for monitoring the Prevent Duty in publicly funded further education and skills providers.

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