Deliverable 5.5:
Quality Assurance and
Quality Control Handbook

WP5: TRAINING MATERIALS AND TOOLS
DIJANA LIKAR
MSC SLAVICA TRAJKOVSKA, MSC SUZANA KASOVSKA GEORGIEVSKA

BIMCert © https://energybimcert.eu

Project reference no.	785185
Deliverable no:	5.5
Work Package no:	WP5
Status	First revision
Version:	01
Author:	Dijana Likar, MSc Slavica Trajkovska, MSc Suzana Kasovska Georgievska
Date:	September 2019
Nature:	Report
Dissemination level:	Public

Table of Contents

.

1. Introduction

The purpose of this Handbook is to explain the process and methods for quality assurance and quality control of BIMcert training program. It has been prepared on the basis of WP4 and WP7 deliverables, it includes description of approval standards for delivery, registration of learners, verification of assessment and certification, in accordance with the selected accreditation scheme.

BIMCert can only be delivered by register training institutions, and they will be notified in writing of any changes to this specification. This specification is provided online and as such is only valid on the day it was printed. The master and control version of this document will be managed by BIMcert (http://www.energybimcert.eu).

2. General description of the BIMcert training program

BIMcert is a training program delivered via a blended online learning platform, offering a range of Building Information Modelling (BIM) learning tools and materials. Through the platform, utilizing gamification and "bite-size" learning, the aim is to deliver training to a wide range of construction industry workers, at a time and location that suits them. The qualifications via BIMcert are targeted at learners who have an interest in working across the architectural, engineering and construction sector, including supply chain, particularly within the area of digital construction and Building Information Modelling. With the focus on the use of BIM for Energy Efficiency, the aim is to improve the building environment by training all involved in more efficient ways of designing and constructing the built environment.

3. Qualification Regulation Information

BIMCert developed Construction skills towards sustainable Energy Efficiency within a Recognized Training programme (CERT). It is a multidisciplinary skills approach that incorporates the entire design chain, full material life cycles, and energy production and consumption in building sector.

Qualification operation start and end dates indicate the lifecycle of the approved training provider to deliver the training. The last date by which learners can be

BIMCert © Construction skills - Energy efficiency -
Regulating supply chain - Tackling climate change
Tel: +44 028 9026 5276 **www. energybimcert.eu**

3

This project has received funding from
the European Union's Horizon 2020
research and innovation programme
under grant agreement No 785155

registered for the qualification is the operational end date, and the certification end date is the last date by which learners can claim their certificate.

Details of the curriculum and approved training providers will be found at *http://www.energybimcert.eu.*

4. Qualification Aim

BIMCert has been designed to provide the learner with a working understanding of the digital construction workflows, including information management, digital collaboration and data interoperability along with the fundamentals in sustainable construction and modelling for Building Information Modelling.

5. Qualification Objectives

Each module and/or course has outlined objectives however in general BIMCert seeks to enable learners to:

- develop skills to enable use of BIM as a tool for sustainable energy efficiency in the sector and to tackle climate change, applicable across a range of architectural, engineering and construction sectors
- develop skills to support career progression within the architectural, engineering and construction sector
- develop a fundamental understanding and skills of Building Information Modelling (BIM) and associated workflows
- develop the fundamental skills to create BIM model using industry standard software
- develop the fundamental skills to create Building Information Modelling (BIM) objects using industry standard software,
- develop a fundamental understanding of the information management requirements for working within digital construction,
- develop a fundamental understanding of digital collaboration within digital construction,

- develop a fundamental understanding of the exchange and use of information within digital construction.

6. Learner Entry Requirements

In general, there are no specific overall mandatory entry requirements for these qualifications, these will be determined on individual basis for each qualification

However, an understanding and appreciation of the construction sector would be beneficial including construction techniques, reading construction plans/drawings, and project management and delivery.

In some cases, advanced qualification will require as prerequisite the completion or recognition of prior knowledge of contents of initial units. (details of specific prerequisites will be clarified and presented in individual unit/ qualification specifications)

Learners must be at least 18 years of age to take these qualifications.

7. Recognition of Prior and Experiential Learning

Learners may gain entry to the programme who have prior and/or experiential learning. Such evidence may be provided to gain exemption/accreditation of modules (in whole or part). These details are to be submitted at time of registration and will be processed before the learner commences the relevant course.

8. Learner Registration Policy

8.1. General provisions

BIMcert is committed to operating a fair and transparent Learner Registration Process. The initial training module of BIMcert, BIM Ready, is intended as a training needs assessment to support the learners in selecting relevant courses, based on their needs and aspirations. BIMcert will provide equality of access to all.

8.2 Data Collection

All data entered will be stored on the BIMcert platform in accordance with GDPR, (or equivalent legislation applicable at the time or registration), and will be limited in nature to essential information. Only relevant information will be shared as necessary with the BIMcert team/administrator.

The main learner details collected may include; learner name, postal and email address, relevant education and qualifications, construction role and payment details. Should a potential learner have education support needs they will be able to contact the BIMcert team/administrator directly.

Following completion of the BIM Ready module and/or review of the courses on offer if applicable the learner will selection optional modules and/or units.

8.3. Registration Follow-up

Upon completion of the registration process and confirmation of payment of course fees the learning will receive log in details and invitation to the course. As part of the commencement of the course learners will have access to "welcoming" instructions and guidelines on how the BIMcert platform works, including the format of course/module delivery and assessment. Learners will receive a follow-up email from the BIMcert team/administrator to ensure they are able to access the BIMcert platform correctly. Learner engagement and active participation may also be monitored by the BIMcert team/administrator and platform with learners receiving reminders as necessary.

9. Delivery Languages

These qualifications are available in English only at this time. Course content and qualifications will be developed in partner languages in near future.

Translated training materials and assessments will follow BIMcert approved formats and standards and are subject to prior approval from BIMcert's administration and standards and procedures external verification team

10. Measures to assure quality of the training

10.1. Delivery Requirements

BIMcert training providers must be legally constituted organizations and demonstrate the organizational resource and staffing capacity to deliver, and maintain the integrity of those qualifications/endorsed courses.

10.2 Staffing

Tutors

Tutors delivering the qualifications should be occupationally competent at a higher level than the qualification and have a minimum of one year's relevant experience in the areas of construction and BIM.

Assessors

The qualifications are assessed within the organization delivering the training and are subject to the Qualification awarding body quality assurance processes. Units are achieved through internally set, internally assessed, and internally verified evidence.

Assessors must:

- be occupationally competent at a higher level than the qualification
- have a minimum of one year's experience in the area they are assessing
- have direct or related relevant experience in assessment
- assess all assessment tasks and activities

10.3. Internal Verification

Qualifications must be scrutinized through the BIMCert's quality assurance processes by the internal verifier.

Internal Verifiers must:
- have at least one year's occupational experience in the areas they are internally verifying
- attend BIMcert internal verifier training

Internal verifiers are required to:

- support tutors and assessors
- sample assessments according to BIMCert's sampling strategy
- ensure tasks are appropriate to the level being assessed
- maintain up-to-date records supporting the verification of assessment and learner achievement

10.5 Structure and Content

Refer to the BIMcert curriculum documentation.

10.6 Pol and Procedures

Organizations seeking to deliver BIMCert qualifications must have in place a number of policies which underpin the organization's delivery of qualifications/endorsed courses. These policies should be supported by appropriate systems, procedures and documentation.

Required policies and procedures:

- Access to fair assessment statement

- Appeals policy for learners

- Complaints policy

- Disability discrimination policy

- Equal opportunities and diversity policy

- Health and safety policy

- Internal verification policy

- Malpractice, maladministration and plagiarism policy

- Reasonable adjustments and special consideration policy

A copy of acceptable policies will be found at *http://www.energybimcert.eu* under policies section, however each organization should adapt them to local jurisdictions rules and policies.

10.7 Resources

Organizations delivering BIMcert must have adequate IT resources and infrastructure to offer the qualifications/endorsed courses, notably the digital infrastructure to support the IT and blended learning requirements for access to the BIMcert platform, training materials and submission of assessment materials.

10.8 Course Delivery

The organization must have systems and procedures in place to ensure and maintain the integrity of qualifications/endorsed courses.

10.9. Quality assurance

The organization must have an effective quality management system appropriate for the size of the organization and the extent of education and/or training provision. The quality management system must include arrangements for internal verification. Internal verification is the process by which BIMcert regularly and systematically reviews and evaluates its assessment practices and decisions to ensure fairness and consistency. The internal verification

process must identify one or more internal verifiers who will be responsible for conducting internal verification activity.

10.10 Malpractice or maladministration

In this context malpractice means any deliberate actions, neglect, default or other practice that compromises, or could compromise the assessment process or the integrity of a qualification/endorsed course. Malpractice includes maladministration. Maladministration means any activity, neglect, default or other practice that results in the organization or learner not complying with the specified requirements for delivery of the qualification or endorsed course. The organization must take all reasonable steps to prevent malpractice but be able to address any issue swiftly if it occurs.

10.11 Learner registration, assessment & certification

The organization must ensure that staff follows BIMcert procedures for the registration, assessment and certification of learners on qualifications /endorsed courses. They must also ensure that accurate and complete records are maintained and that assessment records are retained for the period of time specified in the terms and conditions.

Please note: further chances to these policies and procedures can occur as BIMcert may obtain further approval and endorsement from more Awarding bodies. At present time procedures must aligned with OCN NI requirements.

11.   Summary of assessment procedures

- Candidates must: successfully complete the test prepared for the learning unit.
- The test can be compted on line or in writing on a printed copy, in presence of the assessor.
- Prepared assessment materials will be available on the BIMcert website, in form of a data base of questions (10 to 25 questions for each learning outcome).

- Candidates will be granted access to the assessment materials after they register for testing.

- Prior to start of the assessment, the candidates will sign a Declaration of authentication

- Time of assesment is prescribed for each learning module.

- Criterion for passing the test is aquired minimum 60% of the total number pf points for the assesment material.

- Identfication of learners for on line tests will be done by login using username and pasword.

- Identification of learners for writen tests will be done by identification dosuments.

- Learners must submit work that has been completed by themselves only, without assistance from other learmers, except in cases of group assignments allowed by the tutor

- Learners must mot lend their work to the other learners, unles otherwise allowed by the tutor, for peer learning or other justified methods of learning or assignment.
  Failure to meet the requirements above shall be deemed as malpractise and shall result in disqualification.

- :Learners who have failed an assessment or wish to re-take it in an attempt to improve their grade, will be allowed to repeat this assessment, using different version of assessment tasks and questions than the previous one.

- For the practical assessments (assignments, tasks), BIMcert registered training centres shall ensure that there are sufficient resources to complete the task.