Independent Panel Report on a Provider's Programme Review

Provider	SQT Training Ltd
Programme(s) Reviewed	Diploma in Process Engineering - Lean Six Sigma Black Belt Special Purpose Award at Level 8 on the NQF Certificate in Process Engineering Lean Six Sigma Green Belt Level 7 Special Purpose Award Certificate in Process Engineering Lean Six Sigma Green Belt (Level 6 Special Purpose Award)

Independent Panel Members

Name	Programme review function	Affiliation
Naomi Jackson	Chairperson	Dean of Academic Affairs – CCT College
Dr Olivia McDermott - Hayes	Lecturer / Subject Matter Expert	Lean Six Sigma and Quality Lecturer – NUI Galway
Mary Hickey	Industry Expert / Subject Matter Expert	Process Improvement Manager - Tallaght Hospital
Dr Brían Ó Donnchadha	Expertise on short courses including blended and virtual delivery	CPD Development Officer – NUI Galway
Cathal Curry	Learner representative	NSTEP trained learner representative (recent graduate from DCU)
Louise Fitzpatrick	Independent QA Expert (for validation of new proposed programme, Non-Cas Award Certificate in Lean Six Sigma – Yellow Belt, Level 6, 10 FET Credits.)	QA Officer, City of Dublin ETB
Mary Jennings	Report Writer	Independent Consultant

All members of the independent panel declared their independence of SQT Training Ltd and that they have no conflict of interest

Part 1.   Introduction

The scope of this review encompasses a number of programmes, outlined below, delivered by SQT, a training organisation, founded in 1989, based in Limerick. The programmes are due for a five-year programmatic review under the guidelines set by QQI:

- Certificate in Process Engineering (Special Purpose Award) Lean Six Sigma Green Belt, Level 6 on the National Framework of Qualifications (NFQ)
- Certificate in Process Engineering (Special Purpose Award) Lean Six Sigma Green Belt, Level 7 on the NFQ
- Diploma in Process Engineering (Special Purpose Award) Lean Six Sigma Black Belt, Level 8 on the NFQ

This review section applies to all three programmes under review.

Part 2.   Evaluation Process

2.1   Documents Supplied to the Panel

	Document Type	Document Name
1.	Self-Evaluation Report	Programme Evaluation Reports for SQT Lean Six Sigma Programmes, Levels, 6,7,8 (individual reports)
2.	Programme descriptors	Programme Revalidation Descriptor Submission for PROGRAMME REVALIDATION (individual reports for Level 6,7,8 programmes)
3.	Presentation in PPT at virtual visit	LSS Programmatic Review
4.	Agenda	Agenda Programmatic Review
5.	QQI document	QQI Core Validation Criteria
6.	TOR	Terms of Reference for Programmatic Review
7.	Background information for panel	CV s of SQT Personnel
8.	Reference material	IER SQT LSS Programmes 2016
9.	Background reference material	External Examiners Reports

2.2   Provider's Representatives Met

	Person	Role / Job Title
1.	Lorraine Halpin	Director of Quality and Academic Affairs
2.	Dave Williams	Managing Director
3.	John Ryan	Programme Director, Level 8
4.	Eamon O' Bearra	Programme Director, Level 7
5.	Nicola Donohoe	Programme Tutor
6.	Ashling Keogh	Programme Tutor
7.	Pat Cullinane	Programme Tutors
8.	Davina Kennedy	LSS Course Administration Manager
9.	Julie O Connor	Accreditation and Analytics Manager

Stakeholders Met

Representatives of the following companies were met by the panel:

1. Merck
2. Irish Distillers

3. North Cork Creameries
4. Three
5. Irish Rail

2.3 Description of evaluation process

The panel reviewed Self-Evaluation, Programme Documents and the background documents supplied by SQT (listed above) in advance of the virtual review.

A formal review meeting was conducted by Zoom on 24th March during which the panel met with representatives of SQT including the programme team, learners and graduates and SQT senior management team.

The panel had prepared questions for discussion with SQT and a summary of the findings, recommendations and conditions made by the panel in relation to the revalidation are set out in this document.

A draft report was compiled and sent to the panel members for review. The final Independent Evaluation Report (IER) was then drafted and sent to SQT for factual checking.

Part 3. Panel Findings on Provider Programme Review Report

The following is the panel's commentary and recommendations on the provider's programme review report. It follows the section structure of the report in headings and in sequence. References to specific parts of the provider report will use the relevant report reference e.g., 2.2.4.

Section A. Context and Terms of Reference for the Programme Review

Commentary:

The terms of reference for the programme review are to evaluate the programmes as implemented as these are now due for review in 2021. The overall purpose to determine the following:

	Objective	How SQT will apprach meeting this objective
1.	What has been learned about the programme, as an evolving process (by which learners acquire knowledge, skill and competence), from the experience of providing it for the past five or so years?	This programme review will be conducted in line with the policy and process outlined SQT's policy <u>QAP11-2 – Periodic Review and Revalidation of Programmes</u>. The process will be managed and led by the Director of Quality and Academic Affairs, in close collaboration with the Programme Team including input and support from the Lean Six Sigma Course Administration Manager and the Accreditation and Analytics Manager. SQT will undertake a rigorous self-evaluation process using a broad range of stakeholders. Additionally, quantitative data as well as feedback from learners, graduates, and other relevant stakeholders (internal and external) for the period 2016 to 2020 will be analysed.

2. What can be concluded from a quantitative analysis of admission data, attrition rates by stage, completion rates and grades achieved by module, stage and overall?	All programmes under review are special purpose awards which include one integrative module. Consequently, modules and overall data are in fact the same. In addition all grades are unclasssified. An analysis will be undertaken of admission data and completion rates and grades for learners graduating from 2016 to 2020 inclusive. Feedback received from external examiners will also be considered.
3. What reputation do the programme and provider have with stakeholders (learners, staff, funding agencies, regulatory bodies, professional bodies, communities of practice, employers, other education and training providers) and in particular what views do the stakeholders have about the strengths, weaknesses, opportunities and threats concerning the programme's history and its future?	Specific questions will be included within surveys designed for the review process to determine how SQT is pereived within industry. Additionally, feedback from all relevant stakeholders will be considered in the development of a SWOT analysis and resulting programme improvement plan.
4. What challenges and opportunities are likely to arise in the next five years and what modifications to the programme are required in light of these?	A SWOT analysis will be developed for each programme, together with a SWOT for virtual delivery which was introduced in response to the COVID-19 pandemic. All SWOT's will feed into a Programme Improvement Plan which SQT will commit to implementing within an appropriate timeframe.
5. Whether the programme in light of its stated objectives and intended learning outcomes demonstrably addresses explicit learning needs of target learners and society?	A distinctive feature of SQT is its learner profile. All learners are adults, with the majority in full-time employment. Consequently, SQT works very cloesly with industry to ensure programmes meet explicit learning needs of target learners and society. Employer and graduate feedback will be used to ascertain if the objectives and intended outcomes of the programmes continue to meet needs of it's target learners.
6. What other modifications need to be made to the programme and its awards to improve or reorient it?	Feedback from all relevant stakeholders is considered in the development of a SWOT analysis and resulting programme improvement plan.
7. Whether the programme (modified or unmodified) meets the current QQI validation criteria (and sub-criteria) or, if not, what modifications need to be made to the programme to meet the current criteria?	In completing the self evaluation and programme review report, SQT will determine if the programmes meet the current QQI criteria. Completion of the 'Provider Self Evaluation against the QQI criteria' document will also be completed.
8. Whether the provider continues to have the capacity and capability to provide the programme as planned (considering, for example, historical and projected enrolment numbers	Learner enrollment figures and financial reports will be assessed to determine the profitability and continued viability of these programmes.

and profile and availability and adequacy of physical, financial and human resources) without risk of compromising educational standards or quality of provision in light of its other commitments (i.e. competing demands) and strategy?	Ongoing and systematic qualitative and quantitative feedback recieved from all relevant stakeolders will be used to confirm if the programme should continue.
9. What is the justification (or otherwise) for the provider continuing to offer the programme (modified or unmodified)?	
10. What changes need to be made to related policies, criteria and procedures (including QA procedures)?	Feedback derived from the self evaluation process will be used to determine changes required to related policies, criteria and procedures (including QA procedures).

Information sources to be used

The programme review is to be carried out in accordance with QQI's policies and procedures for systematic programme review as set out in QAP11-2: Periodic Programme Review and Revalidation of Programmes which is accessible at https://www.sqt-training.com/qap11-2/.

These programmes will be reviewed against the validation criteria which includes a review of:

- Programme aims and objectives
- The quality systems and processes in place to successfully deliver and monitor the programmes
- The views of teaching staff, past and current learners, administrative staff servicing the programme, views of other staff that have any association with the programme or those involved with/on the programme
- An analysis of the strengths and weaknesses of the programmes
- The identification of potential opportunities and threats, together with the possible actions to be taken
- An analysis of the success of the programmes to date, learner registrations, student throughput, project cost savings, assessment results and completion rates
- The current resources available for the delivery of the programmes
- Feedback from all stakeholders including graduates, current students, students who have withdrawn from the programme, tutors, external examiners, administration staff and additional external stakeholders
- Employment/advancement opportunities for learners
- The teaching, assessment and learning strategy employed for the delivery of this suite of programmes
- The assessment strategy for each individual programme
- Research and relevant consultancy and project work undertaken by the Tutors
- Links with employers, industry, professions, the business and wider community
- All programme content included in the programme(s)

The following is to be included in the SER:

- Draft programme schedules including adaptations for blended and virtual learning

- Detail of programme changes proposed and the rationale for same
- SWOT Analysis for each programme
- Programme Improvement plan

Recommendations:

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Section B.   Provider Information and Programme Context

Commentary:

Background on the organisation:
SQT was founded in 1989. SQT is located within the National Technology Park in Limerick and the administration / management functions are located on site. SQT offers a range of accredited and non-accredited programmes. Programmes range from 0.5 to 20 teaching days and across twelve broad subject areas, categorised as follows:
1. Lean Six Sigma
2. Continual Process Improvement
3. Project & Programme Management
4. Quality
5. Environment & Energy Management
6. Health & Safety
7. Food Safety
8. Life Sciences
9. Laboratory
10. Hospitals / Medical
11. Train the Trainer
12. Leadership & Personal Development

To date the company has delivered programmes to more than 85,000 learners across hundreds of organisations, spanning a wide range of industries.

The context for this review is the requirement for SQT to conduct a 5-year review of its programmes in order for these to be revalidated.

The panel is satisfied that SQT had conducted a thorough and robust self-evaluation of the programmes under review. The evaluation team had focused on conducting an internal SWOT analysis and had conducted extensive consultation with stakeholder groups with feedback from these groups incorporated into the review. In line with the 3-way partnership model deployed, which involves collaboration between tutors, employers and programme learners, the panel noted

that SQT had used a variety of methods of engaging stakeholders and external examiners including interviews, online surveys and on-going review with staff, both tutors and administrative staff.

The panel did find that information on comparator programmes for benchmarking purposes was not sufficiently outlined in the documentation. In discussion with SQT at the review meeting, the panel was informed that it had proved difficult to make direct comparison with other providers (such as IT Sligo and NUI Galway, for instance). The panel was informed that SQT put particular emphasis on learner projects as the core element of their programme, in line with the practice of professional bodies such as the American Society for Quality (ASQ) whereas other providers took a different approach with an emphasis on completion and assessment of a range of modules. This made it more difficult to compare assessment methodologies and the allocation of credits, for instance.

The panel noted that the current project-centric model is effective and well regarded by stakeholders. This was confirmed by the views expressed to the panel by a number of learners and graduates whom the panel met at the review session. The panel did note however, that, specifically for the Level 8 programme, that the structure might be reviewed in order to facilitate learners to attain credit as they progress. The panel suggested that changes should not negatively impact on the potential for the programme to fulfil its objectives or for learners to evidence attainment of the programme learning outcomes.

The panel made two recommendations in relation to these findings.

Recommendations:

It is recommended that to further enhance future review SQT should also evidence evaluation against external benchmarks within the programme.

It is recommended that, for future reviews, SQT should investigate potential alternative models for structuring the Level 8 programme in a manner which facilitates attainment of credit while progressing through the programme. An evaluation of alternative approaches and rationale for SQT's decision should be included in the programme evaluation report.

Section C.   Baseline qualitative and quantitative information

Programme Data Overview

Commentary:

The panel is satisfied that SQT had provided comprehensive documentation on baseline information in relation to applications, enrolment, attrition, transfer and progression, award classification. It was noted that as learners are generally sponsored by their own organisation to attend the programmes, information on graduate destinations is not relevant to this review. The panel further noted that an analysis of the baseline information had been factored into the review process and the final shape of the proposed programmes.

The panel noted that the requirement to have a relevant qualification in mathematics at Leaving Certificate level had been removed as an entry requirement for the programme, whereas this was still a requirement in similar programmes in other institutions. SQT said this change had been made since learners are now drawn from many sectors, not just manufacturing/engineering sectors and, at Levels 6 &7 there is an emphasis on being able to analyse statistics, rather than being able to calculate them from first principles.

Recommendations:

Programme Delivery and Teaching & Learning Strategies

Commentary:

The panel was informed that, currently, SQT's programmes are validated to be delivered in-person only. However, due to the current COVID-19 restrictions, SQT has been granted permission, on an emergency basis, to deliver the programmes remotely, using a variety of platforms, such as Zoom, Microsoft Teams or WebX, that suit the particular needs of the client companies.

The panel noted that SQT has had ongoing communication with QQI with regard to extending the scope of provision of the programmes under review to include blended and virtual learning modes of delivery and it was further noted that such an extension is beyond the formal scope of this review and revalidation process. Approval of SQT's blended learning and virtual modalities will need to be evaluated as a separate process following publication of revised *Guidelines for Blended and Virtual Delivery.*

As part of this review process, QQI proposed that the desired modes of delivery should be presented to the panel in order to seek preliminary approval. This approval will be subject to Institutional approval of SQT's QA for blended and virtual delivery at a later stage.

The panel noted the work undertaken by SQT to successfully transition current programmes to emergency remote learning and the positive feedback from students in respect of this. The panel further noted the strategic intention of SQT to secure extension of scope of provision for delivery of programmes through blended learning (and ultimately virtual delivery, subject to publication of QQI policy and guidelines). The recommendation of the panel is given below.

Recommendations:

It is recommended that SQT include the programme documents presented in the course of this review as part of the application for approval for extension of scope to blended learning.

Should SQT decide to progress in this manner, the panel further recommends that the validation documents are revised to ensure they fully address the requirements as documented within the QQI publication *Statutory Quality Assurance Guideline for Providers of Blended Learning Programmes*. Informed by the documentation provided to the panel and the engagement with SQT as part of the visit, the panel advises that this should include, but is not limited to:

- A more detailed costing model, evidencing additional costs associated with blended / virtual delivery.
- Information pertaining to the specialist staff (in post or proposed) supporting SQT's blended learning strategy e.g., platform management and administration, technical support, expertise on online pedagogy, educational technology and instructional design, as applicable.
- Documented teaching and learning strategies that are informed by best practice in blended and online provision with educational research informing the pedagogic approach and instructional design.
- Specific minimum requirements of teaching staff in respect of expertise in blended / virtual delivery.
- Arrangements for the induction and CPD of staff involved in the development of online resources and in the practice of online teaching.
- Mechanisms for ensuring data privacy in the blended / virtual learning context.
- Information to potential learners (including admissions requirements) includes detail of hardware and software requirements, required bandwidth, specific devices, the nature of the blend, the expected workload, specific engagement requirements including live online and face-to-face attendance.
- Learner supports (academic, technical and pastoral) and the hours they are available.
- Specific arrangements for developing learner competence as online learners and ongoing supports available.
- Specific arrangements to reflect the legal and regulatory obligations in respect of transnational provision and the implementation of processes and procedures fit for purpose for learners outside of Ireland, as may be applicable.

Section D.   Evaluation of the programme by stakeholders

Evaluation by current learners and graduates of the programme

Commentary:

The panel noted that there was extensive and on-going feedback sought from learners and graduates of the programme through a range of methods including interviews, online surveys and information discussion in class and in tutor meetings. The panel is satisfied that the feedback is incorporated into the review process.

Recommendations:

Evaluation of the programme by Staff

Commentary:

The panel noted that there was extensive and on-going feedback sought from the tutors and other staff on the programme through a range of methods including interviews, online surveys and at meetings of the programme review team and tutors. The panel is satisfied that the feedback is incorporated into the review process.

Recommendations:

External Examiner Feedback

Commentary:

The panel noted that, while the evaluation team reviewed external examiner reports as part of the review process, the reports themselves contained very few recommendations on any changes to the programme or its processes. In discussion with the panel, SQT confirmed that this was the case. SQT indicated that they propose to review the way external examiners engage with the process to ensure that overall, a more formative approach is taken. The panel welcomed this proposal.

Recommendations:

As articulated to the panel, it is recommended that SQT follow through with its plans to investigate additional means of securing more detailed feedback and recommendations from external examiners.

Section E.   Programme Quality Assurance

Complaints, appeals and commendations

Commentary:

The panel noted that, while a clear complaints procedure was in place, no formal complaints or appeals were made over the past number of years. SQT informed the panel that, as classes are small and there is an emphasis on frequent one-to-one mentoring, that any potential issues are dealt with without the necessity for formal complaints or appeals.

Recommendations:

Quality Assurance Systems and Processes

Commentary:

The panel is satisfied that the quality assurance systems and process in place are adequate for the current mode of delivery of the programmes. As noted above, SQT's QA for blended and virtual delivery will be subject to institutional approval on application.

Recommendations:

Additional Quality Assurance Systems and Processes required (e.g. online delivery / assessment)

Commentary:

See above on QA systems.

Recommendations:

Section F.   Summary Analysis of the programme

Commentary:

The review of the programme is comprehensive, the views of stakeholders have been sought and there is evidence that these have been incorporated into the proposed programme. The programme meets a training need for learners and sponsoring organisations in the area of continuous improvement using the Lean Six Sigma methodology. SQT has robust processes in place for entry requirements, teaching and learning and assessment strategies. Learners are well-informed and well-cared for by well qualified and responsive tutors. The QA processes in place are adequate.

Recommendations:

Section G.   Revision of the programme

Commentary

In general, the panel is satisfied that the proposed revisions to the programme are clear and appropriate and follow on from the review process that SQT engaged in while preparing the programme. Further detail is given in the evaluation report section of this document.

Recommendations:

Part 4.   Overall Findings

In this section the panel will give its overall feedback on the conduct of the review and the findings therein. This feedback will inform future provider review processes and will also contribute to the refinement of any programmes being proposed for revalidation following this review process.

Section A.   Commentary on review process:

The panel is satisfied that SQT conducted a comprehensive and robust review process, involving all stakeholders and staff. It was clear that there is an on-going review process within SQT and that this contributes to the overall evolution of the programmes in a timely and appropriate way.

It noted that the review process in relation to establishing comparator benchmarks needed to be extended and enhanced to include institutions in Ireland and overseas.

As the Level 8 programme consists of one module only, this model does not easily facilitate attainment of credit while progressing through the programme and that alternative approaches might be considered in future reviews.

The panel acknowledges the extensive work undertaken by SQT in preparing the review, revalidation application documents and commends SQT on the high standard of the documentation submitted.

The panel commended SQT on the open and transparent engagement throughout the process. A strong enhancement focus was evidenced through the range of developments implemented since the last review which were outlined and demonstrated to the panel.

Section B.   Recommendations on review process:

- It is recommended that to further enhance future review SQT should also evidence evaluation against external benchmarks within the programme.
- It is recommended that, for future reviews, SQT should investigate potential alternative models for structuring the Level 8 programme in a manner which facilitates attainment of credit while progressing through the programme. An evaluation of alternative approaches and rationale for SQT's decision should be included in the programme evaluation report.
- It is recommended that SQT include the programme documents presented in the course of the review to the panel as part of the application for approval for extension of scope to blended learning. Should SQT decide to progress in this manner, the panel further recommends that the validation documents are revised to ensure they fully address the requirements as documented within the QQI publication *Statutory Quality Assurance Guideline for Providers of Blended Learning Programmes*. Informed by the documentation provided to the panel and the engagement with SQT as part of the visit, the panel advises that this should include, but is not limited to:
  - A more detailed costing model, evidencing additional costs associated with blended / virtual delivery.
  - Information pertaining to the specialist staff (in post or proposed) supporting SQT's blended learning strategy e.g., platform management and administration, technical support, expertise on online pedagogy, educational technology and instructional design, as applicable.
  - Documented teaching and learning strategies that are informed by best practice in blended and online provision with educational research informing the pedagogic approach and instructional design.

- Specific minimum requirements of teaching staff in respect of expertise in blended / virtual delivery.
- Arrangements for the induction and CPD of staff involved in the development of online resources and in the practice of online teaching.
- Mechanisms for ensuring data privacy in the blended / virtual learning context.
- Information to potential learners (including admissions requirements) includes detail of hardware and software requirements, required bandwidth, specific devices, the nature of the blend, the expected workload, specific engagement requirements including live online and face- to- face attendance.
- Learner supports (academic, technical and pastoral) and the hours they are available.
- Specific arrangements for developing learner competence as online learners and ongoing supports available.
- Specific arrangements to reflect the legal and regulatory obligations in respect of transnational provision and the implementation of processes and procedures fit for purpose for learners outside of Ireland, as may be applicable.
- As articulated to the panel, it is recommended that SQT follow through with its plans to investigate additional means of securing more detailed feedback and recommendations from External Examiners.

Section C.   Commentary on programme revisions:

The programmes revisions were considered to be appropriate by the panel.

Section D.   Recommendations on programme revisions:

Signed:

Panel Chairperson:

Date: 22/ 06/2021

Independent Evaluation Report on an Application for Revalidation of a Programme of Education and Training

Part 1.   Provider details

Provider name	SQT Training Ltd
Date of site visit	24th March 2021
Date of report	19th April 2021

Section A.   Overall recommendations

Principal programme	Title	Diploma in Process Engineering - Lean Six Sigma Black Belt
	Award	Special Purpose Award at Level 8 on the NQF
	Credit	60ECTS
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	Satisfactory subject to proposed conditions.

Section B.

Independent Panel Members

Name	Programme review function	Affiliation
Naomi Jackson	Chairperson	Dean of Academic Affairs – CCT College
Dr Olivia McDermott - Hayes	Lecturer / Subject Matter Expert	Lean Six Sigma and Quality Lecturer – NUI Galway
Mary Hickey	Industry Expert / Subject Matter Expert	Process Improvement Manager - Tallaght Hospital
Dr Brían Ó Donnchadha	Expertise on short courses including blended and virtual delivery	CPD Development Officer – NUI Galway

Cathal Curry	Learner representative	NSTEP trained learner representative (recent graduate from DCU)
Louise Fitzpatrick	Independent QA Expert (for validation of new proposed programme, Non-Cas Award Certificate in Lean Six Sigma – Yellow Belt, Level 6, 10 FET Credits.)	QA Officer, City of Dublin ETB
Mary Jennings	Report Writer	Independent Consultant

Section C.   Diploma in Process Engineering, Lean Six Sigma Black Belt

Names of centre(s) where the programme(s) is to be provided	Maximum number of learners (per centre)	Minimum number of learners
Public Programmes: These are delivered at central locations, typically hotel venues across Ireland. **In-house Programmes:** Such programmes are usually delivered at the company's own facilities.	70	8

Proposed Enrolment	
Date of first intake	September 2021
Maximum number of annual intakes	7
Maximum total number of learners per intake	10
Programme duration (months from start to completion)	18 months, part-time
Panel Commentary on proposed enrolment: No commentary on enrolment.	
Target learner groups	
The Black Belt programme Level 8 is generally geared at engineers or equivalent in manufacturing or business analysts in service organisations. The aim of the programme is to produce graduates who possess advanced knowledge of theory and practice of Lean Six Sigma to enable them to establish and/or take leadership roles in process improvement efforts in manufacturing or data intensive service organisations.	
Approved countries for provision	Ireland
Delivery mode: Full-time/Part-time	Part-time
The teaching and learning modalities	
Face-to-face Classroom	

Brief synopsis of the programme (e.g., who it is for, what is it for, what is involved for learners, what it leads to.)
The aim of the programme is to produce graduates who possess advanced knowledge of theory and practice of Lean Six Sigma to enable them to establish and/or take leadership roles in process improvement efforts in manufacturing or data intensive service organisations. Completing a project is a central part of the programme. Applying the theory in practice is one of the key methods of ensuring that the learner has fully understood the theory. Learners must have a suitable project in order to commence the programme. All Black Belt learners require Project Sponsors within their organisation, which are termed Lean Six Sigma Champions, who help provide resources and support to the Black Belt learner.

Summary of specifications for teaching staff	WTE
SQT have set the following four minimum pre-requisite requirements for Tutors: 1. Hold a third level degree (at a minimum) in a relevant discipline. Where an accreditation / professional body sets additional specific academic or professional qualifications, these must also be adhered to. 2. A pedagogical qualification is required. In the case of experienced Tutors who do not possess a formal pedagogical qualification, this should be completed within one year of Tutor approval. SQT's minimum requirement is the QQI accredited *Training Delivery and Evaluation* minor award (6N3326). 3. 10 years relevant industry experience. 4. Practical training / teaching and assessment experience is highly advantageous.	.9

Learning Activity	Ratio of learners to teaching staff
The projects show that the learner is able to integrate knowledge, handle complexity and formulate judgements. The learner must within 18 months of programme commencement: • Submit a Project Proposal (Project Charter and Project Plan) • Submit a Written Project Report (guide size 5,000 words) • Make an Oral Presentation on their project.	1:10
Panel Commentary on programme outline and staffing: The outline is clear and staff are qualified as tutors in the Black Belt Lean Six Sigma methods.	

Programmes being replaced (applicable to applications for revalidation)		
Code	Title	Last enrolment date
PG22436	Diploma in Process Engineering	31/08/2021

Section D.   Other noteworthy features of the application

See section on Programme Delivery, Teaching and Learning Strategies above. The panel had been requested to make preliminary recommendations on blended/virtual learning mode of delivery for this programme.

Part 2. Evaluation against the validation criterion

Criterion 1   The provider is eligible to apply for validation of the programme

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a) The provider meets the prerequisites (section 44(7) of the 2012 Act) to apply for validation of the programme.
b) The application for validation is signed by the provider's chief executive (or equivalent) who confirms that the information provided is truthful and that all the applicable criteria have been addressed.
c) The provider has declared that their programme complies with applicable statutory, regulatory and professional body requirements.[1]
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<td></td>
<td>**Satisfactory? (yes, no, partially)**</td>
<td>**Comment**</td>
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<tr>
<td>Diploma in Process Engineering - Lean Six Sigma Black Belt</td>
<td>Yes</td>
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As an established provider of programmes SQT has met the prerequisites (section 44(7) of the 2012 Act) to apply for revalidation of this programme. It was noted that SQT has in place procedures for access, transfer and progression as set out in the Programme Document, SQT has also established arrangements for the Protection of Enrolled Learners (PEL) which have been approved by QQI.

SQT provided a copy of the letter to be submitted to QQI with the application for the revalidation of the programme. The letter contained the signature and declaration required under sub-criteria 1b) and 1c).

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[1] This criterion is to ensure the programme can actually be provided and will not be halted on account of breach of the law. The declaration is sought to ensure this is not overlooked but QQI is not responsible for verifying this declaration of enforcing such requirements.

Criterion 2. The programme objectives and outcomes are clear and consistent with the QQI awards sought

a) The programme aims and objectives are expressed plainly.
b) A QQI award is specified for those who complete the programme.
   (i) Where applicable, a QQI award is specified for each embedded programme.
c) There is a satisfactory rationale for the choice of QQI award(s).
d) The award title(s) is consistent with unit 3.1 of QQI's *Policy and Criteria for Making Awards.*
e) The award title(s) is otherwise legitimate for example it must comply with applicable statutory, regulatory and professional body requirements.
f) The programme title and any embedded programme titles are
   (i) Consistent with the title of the QQI award sought.
   (ii) Clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders.
g) For each programme and embedded programme
   (i) The **minimum intended programme learning outcomes** and any other educational or training objectives of the programme are explicitly specified.[2]
   (ii) The minimum intended programme learning outcomes to qualify for the QQI award sought are **consistent with** the relevant QQI awards standards.
h) Where applicable, the **minimum intended module learning outcomes** are explicitly specified for each of the programme's modules.
i) Any QQI minor awards sought for those who complete the modules are specified, where applicable.

For each minor award specified, the minimum intended module learning outcomes to qualify for the award are consistent with relevant QQI minor awards standards.[3]

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Yes	

The panel found that the aims, objectives and rationale for the programme were expressed clearly, as set out in Section 2.1 of the Programme Document.

It was concluded that the programme and module learning outcomes have been clearly outlined and were appropriate to the level of the award. The title of the programme was deemed to be appropriate and in line with the QQI standard for the award type on the NFQ.

In discussion with the panel at the review meeting, SQT stated the learning outcomes are broad so that they can accommodate the varying needs of different industry sectors, and at the same time, ensure that learners acquire appropriate, transferable skills. It was further stated that the intention is to deliver on the same skill set but different tools may be used to achieve outcomes, for example,

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[2] Other programme objectives, for example, may be to meet the educational or training requirements of a statutory, regulatory or professional body.
[3] Not all modules will warrant minor awards. Minor awards feature strongly in the QQI common awards system however further education and training awards may be made outside this system.

for some learners a critical element might be how have a structured way to manage change while for others, a key area to consider might be the implementation of sustainable energy practices.

The panel is satisfied that the minimum intended programme learning outcomes for the programme were informed by the QQI Generic Awards Standards and have been mapped against these standards.

Criterion 3: The programme concept, implementation strategy, and its interpretation of QQI awards standards are well informed and soundly based (considering social, cultural, educational, professional and employment objectives)

a) The development of the programme and the intended programme learning outcomes has sought out and taken into account the views of stakeholders such as learners, graduates, teachers, lecturers, education and training institutions, employers, statutory bodies, regulatory bodies, the international scientific and academic communities, professional bodies and equivalent associations, trades unions, and social and community representatives.[4]

b) The interpretation of awards standards has been adequately informed and researched; considering the programme aims and objectives and minimum intended programme (and, where applicable, modular) learning outcomes.
   (i) There is a satisfactory rationale for providing the programme.
   (ii) The proposed programme compares favourably with existing related (comparable) programmes in Ireland and beyond. Comparators should be as close as it is possible to find.
   (iii) There is support for the introduction of the programme (such as from employers, or professional, regulatory or statutory bodies).
   (iv) There is evidence[5] of learner demand for the programme.
   (v) There is evidence of employment opportunities for graduates where relevant[6].
   (vi) The programme meets genuine education and training needs.[7]

c) There are mechanisms to keep the programme updated in consultation with internal and external stakeholders.

d) Employers and practitioners in the cases of vocational and professional awards have been systematically involved in the programme design where the programme is vocationally or professionally oriented.

e) The programme satisfies any validation-related criteria attaching to the applicable awards standards and QQI awards specifications.

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Partially	See commentary and condition below

The panel was informed at the virtual site visit of the evolution of SQT's programmes since initial validation by QQI in 2007. While the programme is now mapped against QQI award criteria, it was stated that the original programme was influenced by the US professional body concerned with quality in industry, American Quality Society (AQS) which has a pragmatic, generally project-based approach to solving issues relating to continuous improvement and quality across a broad range of industries. The need for such programmes has been stated in government industrial and employment policies for many years, SQT told the panel. SQT works with many different sectors in

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[4] Awards standards however detailed rely on various communities for their interpretation. This consultation is necessary if the programme is to enable learners to achieve the standard in its fullest sense.

[5] This might be predictive or indirect.

[6] It is essential to involve employers in the programme development and review process when the programme is vocationally or professionally oriented.

[7] There is clear evidence that the programme meets the **target learners'** education and training needs and that there is a clear demand for the programme.

delivering the programme and indicated that, with a broad-based programme, centred on the completion of a project by learners, with small numbers of learners per cohort and a high level of individual mentoring, it meets the needs of specific industries and learners effectively.

In meeting with industry and learner representatives at the virtual site visit, it was clear that the programme, its overall approach and level of engagement with learners by SQT, was highly valued by them and had enabled organisations to make significant change and, at the same time, provide learners with opportunities for personal and professional development.

It is clear that SQT engage with industry and learner stakeholders on an on-going basis through a variety of methods, including interviews, surveys and informal conversations with a view to ensuring that the programme meets different training needs and address emerging areas of concern such as action on climate change, sustainability of businesses and change management.

The panel found, however, that the information provided in the programme documentation was not sufficiently clear in a number of areas, including the specific education and training needs met by the programme which SQT had outlined to the panel at the visit. The panel also found that the intended target market was not fully outlined in the programme documentation and would need to be more fully described to ensure that the demand for the programme was highlighted.

The panel also found that there was insufficient comparison with other providers that might have highlighted the rationale for SQT's approach more clearly and transparently, particularly in relation to such areas as entry requirements, delivery models, curriculum content and assessment strategies. It is a condition that SQT provide this further documentation in the programme descriptor as outlined below. See also Criteria 5, 9,10 for further comment on this point.

Condition

It is a condition that SQT review and revise the programme descriptor to more fully reflect the information provided to the panel as part of the virtual visit. Specifically, this must include:
- Evidence of a more encompassing and transparent comparison with programmes of other providers in Ireland and beyond, identifying the similarities and differences with SQT's programme and providing the rationale for SQT's approach. Ideally, such a comparison should include detail of entry requirements, programme delivery model, credits, duration, curriculum content and assessment strategies.
- Details of the specific education and training need met by the programme (descriptor HET section 3.2)
- A fuller description of the intended target market for the Level 8 programme (HET descriptor section 3.2)

Commendation

The panel further commends SQT for its highly effective approach to the management of relationships with all stakeholders which has resulted in its tutors and staff being held in high regard and SQT being the provider of choice for a range of organisations across multiple industries.

Criterion 4. The programme's access, transfer and progression arrangements are satisfactory

a) The information about the programme as well as its procedures for access, transfer and progression are consistent with the procedures described in QQI's policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training. Each of its programme-specific criteria is individually and explicitly satisfied[8].

b) Programme information for learners is provided in plain language. This details what the programme expects of learners and what learners can expect of the programme and that there are procedures to ensure its availability in a range of accessible formats.

c) If the programme leads to a higher education and training award and its duration is designed for native English speakers, then the level of proficiency in English language must be greater or equal to B2+ in the Common European Framework of Reference for Languages (CEFRL[9]) in order to enable learners to reach the required standard for the QQI award.

d) The programme specifies the learning (knowledge, skill and competence) that **target learners** are expected to have achieved before they are enrolled in the programme and any other assumptions about enrolled learners (programme participants).

e) The programme includes suitable procedures and criteria for the **recognition of prior learning** for the purposes of access and, where appropriate, for advanced entry to the programme and for exemptions.

f) The programme title (the title used to refer to the programme):-

   (i) Reflects the core *intended programme learning outcomes*, and is consistent with the standards and purposes of the QQI awards to which it leads, the award title(s) and their class(es).

   (ii) Is learner focused and meaningful to the learners;

   (iii) Has long-lasting significance.

g) The programme title is otherwise legitimate; for example, it must comply with applicable statutory, regulatory and professional body requirements.

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Partially	See condition below.

The panel was informed that many learners on the programme already had qualifications to degree at Levels 8/9 on the NFQ. Learners enrolled on this programme, with its foundation in the Lean Six Sigma approach, included those wishing to acquire a specific set of skills for their career progression.

The panel noted the entry requirements outlined in the programme document (Section 4.2.2) include a Level 8 qualification, a Certificate in Process Engineering, Lean Six Sigma Green Belt, Level 7 or through demonstration of appropriate APEL. It was considered that more detail was needed on

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[8] Each of the detailed criteria set out in the Policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training must be addressed in the provider's evaluation report. The detailed criteria   are (QQI, restated 2015) arranged under the headings
- Progression and transfer routes
- Entry arrangements
- Information provision

[9] http://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf (accessed 26/09/2015)

the general requirements for learners to succeed, with a greater emphasis on the attributes required.

 SQT stated that 16% of learners came through the APEL route, with 84% through the qualifications route, most frequently graduates of the Green Belt, Level 7 programme. SQT informed the panel that discussions in relation to relevant prior learning were conducted with the sponsoring organisation as well as the candidate, with most meeting the academic standard required. It was stated that there was very little deviation in the successful completion rates of learners gaining entry by different routes.

The panel concluded that greater clarity was needed that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.

It was noted that a qualification in mathematics at Leaving Certificate, Level 5, is no longer a requirement for entry onto the programme. In discussion with the panel, SQT stated that while there is frequently a requirement for learners to use statistics as an integral part of the Lean Six Sigma approach, the emphasis is on developing the ability to interpret or analyse stats, rather than learn how to calculate them from raw data. Training in the use of relevant software enabled learners to develop this capacity, where this is relevant as not every project is a data-rich one, the panel was informed.

The panel noted that the minimum language proficiency requirements for entrants whose first language is not English may self-assess their English language competency using the Common European Framework of Reference for Languages (CEFRL) at a level that is greater than or equal to B2+ on the framework. The panel is not satisfied that the self-assessment route is sufficient evidence of competency and verifiable evidence would be a requirement.

Condition

It is a condition that SQT revise the documented programme entry requirements to include the following:

- Confirmation that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.
- The English language assessments that are accepted as verifiable evidence of English language competence be clearly stated.

Criterion 5. The programme's written curriculum is well structured and fit-for-purpose

a) The programme is suitably structured and coherently oriented towards the achievement by learners of its intended programme learning outcomes. The programme (including any stages and modules) is integrated in all its dimensions.

b) In so far as it is feasible the programme provides choice to enrolled learners so that they may align their learning opportunities towards their individual educational and training needs.

c) Each module and stage is suitably structured and coherently oriented towards the achievement by learners of the intended *programme* learning outcomes.

d) The objectives and purposes of each of the programme's elements are clear to learners and to the provider's staff.

e) The programme is structured and scheduled realistically based on sound educational and training principles[10].

f) The curriculum is comprehensively and systematically documented.

g) The credit allocated to the programme is consistent with the difference between the entry standard and minimum intended programme learning outcomes.

h) The credit allocated to each module is consistent with the difference between the module entry standard and minimum intended module learning outcomes.

i) Elements such as practice placement and work-based phases are provided with the same rigour and attentiveness as other elements.

j) The programme duration (expressed in terms of time from initial enrolment to completion) and its fulltime equivalent contact time (expressed in hours) are consistent with the difference between the minimum entry standard and award standard and with the credit allocation.[11]

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Yes	

In general, the panel is satisfied that the curriculum is well structured and fit for purpose.

The panel was informed that the structure of the curriculum is based on enabling learners to develop the capacity to complete a project that has been chosen by their sponsoring employers, using the Lean Six Sigma methodology. The project uses the Lean Six Sigma model as a core element of the curriculum.   This model is effective and works well in practice. As noted in the Part 1 of this document on the evaluation of the review process, the panel considered that, in future reviews, the structure might be looked at again in order to facilitate learners to attain credit as they progress.

It was noted by the panel that statistics is not taught as a stand-alone part of the curriculum. In discussion with SQT, the panel was informed that most learners have a basic understanding of

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[10] This applies recursively to each and every element of the programme from enrolment through to completion.
In the case of a modular programme, the pool of modules and learning pathway constraints (such as any prerequisite and co-requisite modules) is explicit and appropriate to the intended programme learning outcomes.

[11] If the duration is variable, for example, when advanced entry is available, this should be explained and justified

statistical principles and the emphasis in the programme is on interpretation and analysis of stats. It was stated that there is a range of quality software readily available that guides learners through a roadmap to get the information and data required. SQT provides guides on how to use the software available, the panel was informed. See further comment on this under Criterion 4. Support for this element of the curriculum is also available from tutors.

Criterion 6. There are sufficient qualified and capable programme staff available to implement the programme as planned

<table>
<tr><td colspan="3">
a) The specification of the programme's staffing requirements (staff required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme and its defined purpose. The specifications include professional and educational qualifications, licences-to-practise where applicable, experience and the staff/learner ratio requirements. See also criterion 12 c).

b) The programme has an identified complement of staff[12] (or potential staff) who are available, qualified and capable to provide the specified programme in the context of their existing commitments.

c) The programme's complement of staff (or potential staff) (those who support learning including any employer-based personnel) are demonstrated to be competent to enable learners to achieve the intended programme learning outcomes and to assess learners' achievements as required.

d) There are arrangements for the performance of the programme's staff to be managed to ensure continuing capability to fulfil their roles and there are staff development[13] opportunities[14].

e) There are arrangements for programme staff performance to be reviewed and there are mechanisms for encouraging development and for addressing underperformance.

f) Where the programme is to be provided by staff not already in post there are arrangements to ensure that the programme will not enrol learners unless a complement of staff meeting the specifications is in post.
</td></tr>
<tr><td></td><td>**Satisfactory? (yes, no, partially)**</td><td>**Comment**</td></tr>
<tr><td>Diploma in Process Engineering - Lean Six Sigma Black Belt</td><td>Yes</td><td></td></tr>
</table>

The panel was advised that there are sufficient suitably qualified tutors to deliver the programme. All are trained in the Lean Six Sigma methodology, and have many years' experience of working in various sectors. There is an emphasis on one-to-one mentoring of learners on chosen projects as well as on formal teaching of the curriculum, it was stated. This was evident in the discussion the panel had with learners and graduates of the programme who indicated that the tutors were readily available and that this was a particular feature of the SQT programme which has small numbers of learners in each cohort.

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[12] Staff here means natural persons required as part of the programme and accountable (directly or indirectly) to the programme's provider, it may for example, include contracted trainers and workplace supervisors.

[13] Development here is for the purpose of ensuring staff remain up-to-date on the discipline itself, on teaching methods or on other relevant skills or knowledge, to the extent that this is necessary to ensure an adequate standard of teaching.

[14] Professional or vocational education and training requires that teaching staff's professional/vocation knowledge is up to date. Being qualified in a discipline does not necessarily mean that a person is currently competent in that discipline. Therefore, performance management and development of professional and vocational staff needs to focus on professional/vocational competence as well as pedagogical competence. Professional development may include placement in industry, for example. In regulated professions it would be expected that there are a suitable number of registered practitioners involved.

SQT stated that current staff had participated in initial training workshops to facilitate the pivot to emergency remote learning during the pandemic.

The strategic intention of SQT is to deliver its programmes on a blended or virtual basis in the future and staff will be upskilled as the need arises. As stated, SQT will be seeking accreditation from QQI for these modes of delivery in due course and the panel indicated that staff re-training or upskills should form part of this process.

Criterion 7. There are sufficient physical resources to implement the programme as planned

a) The specification of the programme's physical resource requirements (physical resources required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme, its defined purpose and its resource/learner-ratio requirements. See also criterion 12 d).

b) The programme has an identified complement of supported physical resources (or potential supported physical resources) that are available in the context of existing commitments on these e.g. availability of:
   (i) suitable premises and accommodation for the learning and human needs (comfort, safety, health, wellbeing) of learners (this applies to all of the programme's learning environments including the workplace learning environment)
   (ii) suitable information technology and resources (including educational technology and any virtual learning environments provided)
   (iii) printed and electronic material (including software) for teaching, learning and assessment
   (iv) suitable specialist equipment (e.g. kitchen, laboratory, workshop, studio) – if applicable
   (v) technical support
   (vi) administrative support
   (vii) company placements/internships – if applicable

c) If versions of the programme are provided in parallel at more than one location each independently meets the location-sensitive validation criteria for each location (for example staffing, resources and the learning environment).

d) There is a five-year plan for the programme. It should address
   (i) Planned intake (first five years) and
   (ii) The total costs and income over the five years based on the planned intake.

e) The programme includes controls to ensure entitlement to use the property (including intellectual property, premises, materials and equipment) required.

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Yes	

The panel noted that SQT has never been a 'bricks and mortar' campus as the mode of delivery is either in-house in client companies or in hotels or conference centres for public programmes. It was stated that SQT put considerable resources into its IT function, providing access to programme materials on Moodle for instance and ensuring that there are sufficient administrative resources to provide support for queries by email, message board or phone calls to learners and client companies.

It was evident to the panel that SQT had made considerable efforts to successfully transition to provide the programme remotely, while ensuring that there had been no compromise on maintaining standards and commitment to learners. The panel commends SQT for its efforts in this regard. The Panel notes the intention for SQT to deliver programmes through blended learning on an ongoing basis. Acknowledging how this differs from emergency remote learning, the panel encourages SQT to consider further enhancements in the use of TEL to promote pedagogic approaches reflecting good practice in online and blended learning delivery.

Commendation

The panel commends SQT's successful transition to emergency remote learning arising from the COVID-19 pandemic and commends SQT on the stepped, cautionary approach that they employed to ensure maintenance of standards and fulfilment of commitments to learners.

Criterion 8. The learning environment is consistent with the needs of the programme's learners

a)	| The programme's physical, social, cultural and intellectual environment (recognising that the environment may, for example, be partly virtual or involve the workplace) including resources and support systems are consistent with the intended programme learning outcomes.	

<table>
<tr><td colspan="3">a) The programme's physical, social, cultural and intellectual environment (recognising that the environment may, for example, be partly virtual or involve the workplace) including resources and support systems are consistent with the intended programme learning outcomes.
b) Learners can interact with, and are supported by, others in the programme's learning environments including peer learners, teachers, and where applicable supervisors, practitioners and mentors.
c) The programme includes arrangements to ensure that the parts of the programme that occur in the workplace are subject to the same rigours as any other part of the programme while having regard to the different nature of the workplace.</td></tr>
<tr><td></td><td>Satisfactory? (yes, no, partially)</td><td>Comment</td></tr>
<tr><td>Diploma in Process Engineering - Lean Six Sigma Black Belt</td><td>Yes</td><td></td></tr>
</table>

The panel was informed that there are mechanisms in place to ensure that learners have the appropriate level of learner supports in the current environment. SQT quickly adapted to an online remote learning environment, offering key elements of the programme on a range of platforms to suit different organisations and the learner cohort. These include Zoom, Webx and Microsoft Teams among others. While the SQT team acknowledged some of the difficulties they encountered in making the transition, including working with a range of platforms to deliver content and sometimes poor internet connectively in some areas, the panel was informed that they made every effort to ensure that learners became quickly familiar with using the technology effectively. SQT introduced the idea of 'tech checks' at the beginning of sessions to support learners and used their own IT personnel to support learners.

The panel was informed that SQT tutors take a pro-active approach in supporting learners who are undertaking the programme part-time. This includes, for instance, providing timely reminders on upcoming project milestones, encouraging learners to provide informal project reviews and, in a blended learning environment, providing smaller increments of teaching inputs. Further support is provided by encouraging sponsoring companies or champions to take an active interest in the project and so provide learners with in-house backing.

In discussions with the panel, learners and graduates commented on the positive learning environment provided by SQT and indicated that it was one of the main reasons for enrolling in their programmes. Tutors were readily available to provide support as needed on projects or assignments.

The panel noted that the full range and extent of the supports provided to learners as outlined during the virtual visit and confirmed by the learners and the graduates met had not been fully documented in the programme descriptor document and recommends that this be addressed.

Recommendation

It is recommended that the range and extent of supports SQT provides to learners be more fully documented within the SQT programme descriptor to reflect the good practice evidenced in discussion with the SQT team and endorsed by stakeholders, during the panel visit.

Commendation

The panel wishes to commend SQT on its openly apparent commitment to a high quality, student-centred learning experience and the dedicated learner support and mentoring extended to each learner. The positive impact of the extent of student engagement that SQT facilitates through its model of small group sizes was clearly evident and endorsed by stakeholders that the panel met at the virtual visit.

Criterion 9. There are sound teaching and learning strategies

a) The teaching strategies support achievement of the intended programme/module learning outcomes.
b) The programme provides authentic learning opportunities to enable learners to achieve the intended programme learning outcomes.
c) The programme enables enrolled learners to attain (if reasonably diligent) the minimum intended programme learning outcomes reliably and efficiently (in terms of overall learner effort and a reasonably balanced workload).
d) Learning is monitored/supervised.
e) Individualised guidance, support15 and timely formative feedback is regularly provided to enrolled learners as they progress within the programme.

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Yes	

In general, the panel is satisfied that there are sound teaching and learning strategies in place. It was evident from discussions with learners and graduates during the virtual visit that the approach taken to teaching and learning was valued by them and working in practice.

It was clear from the information supplied by SQT at the virtual visit that the teaching and learning strategies are tailored to each learner to ensure that their needs are met.

It was noted that the sponsoring company had a large influence over which project the learner took on and that, at times, the sponsoring company champion did not fully understand the process involved and, at times, had unrealistic expectations of what might be achievable within a particular project. It was stated that SQT made every effort to involve the sponsor so that the learner was supported to attain all the learning outcomes of the programme.

As noted in Criterion 5 above and in Part 1 of this document the structure of the programme should be reviewed to ensure that learners can gain credit as they progress as well as attain the programme learning outcomes, with more explicit credit-bearing milestones along the way, rather than the current emphasis on completion of a project.

The panel is not fully satisfied that the teaching and learning strategy, including formative assessment that is specific to each programme, is fully documented and makes the following recommendation below.

Recommendation

It is recommended that teaching and learning (including formative assessment) strategy specific to the programme is fully documented (HET descriptor section 5.6, FET descriptor section 7.5) outlining

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[15] Support and feedback concerns anything material to learning in the context of the programme. For the avoidance of doubt it includes among other things any course-related language, literacy and numeracy support.

the pedagogic approach, rooted in good practice as evidenced by the theoretical underpinning which informs it, and describing the nature of teaching, learning and formative assessment activities.

Criterion 10. There are sound assessment strategies

a) All assessment is undertaken consistently with *Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards*[16]

b) The programme's assessment procedures interface effectively with the provider's QQI approved quality assurance procedures.

c) The programme includes specific procedures that are fair and consistent for the assessment of enrolled learners to ensure the minimum intended programme/module learning outcomes are acquired by all who successfully complete the programme.[17]

d) The programme includes formative assessment to support learning.

e) There is a satisfactory written **programme assessment strategy** for the programme as a whole and there are satisfactory module assessment strategies for any of its constituent modules.[18]

f) Sample assessment instruments, tasks, marking schemes and related evidence have been provided for each award-stage assessment and indicate that the assessment is likely to be valid and reliable.

g) There are sound procedures for the moderation of summative assessment results.

h) The provider only puts forward an enrolled learner for certification for a particular award for which a programme has been validated if they have been specifically assessed against the standard for that award.[19]

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Yes	

In general, the panel was satisfied with the overall assessment strategy used in the programme. One of the main strategies is assessing whether the learner's project attained the objectives set and agreed with the sponsoring company. This might be, for instance, costs savings of a particular amount or the development and implementation of a particular change management strategy. No grades are ascribed to projects per se; if the objectives are sufficiently met the learner is nominated for the Special Purpose Award.

As noted in Criterion 9, Teaching and Learning Strategies, it is recommended that the formative assessment used in the programme be more fully documented.

The panel noted that, in the grading guidelines outlined in the programme descriptor, a grade of 4 or 3 out of 10 was declared sufficient to obtain a pass standard, whereas it should be clear that to obtain a pass mark the learner must attain a 40% mark.

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[16] See the section on transitional arrangements.

[17] This assumes the minimum intended programme/module learning outcomes are consistent with the applicable awards standards.

[18] The programme assessment strategy is addressed in the Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards. See the section on transitional arrangements.

[19] If the award is a QQI CAS compound award it is not necessarily sufficient that the learner has achieved all the components specified in the certification requirements unless at least one of those components is a capstone component (i.e. designed to test the compound learning outcomes).

Recommendation

It is recommended that SQT view and revise the grading guide included within the programme descriptor to ensure correct alignment with the pass standard of 40%.

Criterion 11. Learners enrolled on the programme are well informed, guided and cared for

a) There are arrangements to ensure that each enrolled learner is fully informed in a timely manner about the programme including the schedule of activities and assessments.

b) Information is provided about learner supports that are available to learners enrolled on the programme.

c) Specific information is provided to learners enrolled on the programme about any programme-specific appeals and complaints procedures.

d) If the programme is modular, it includes arrangements for the provision of effective guidance services for learners on the selection of appropriate learning pathways.

e) The programme takes into account and accommodates to the differences between enrolled learners, for example, in terms of their prior learning, maturity, and capabilities.

f) There are arrangements to ensure that learners enrolled on the programme are supervised and individualised support and due care is targeted at those who need it.

g) The programme provides supports for enrolled learners who have special education and training needs.

h) The programme makes reasonable accommodations for learners with disabilities[20].

i) If the programme aims to enrol international students it complies with the *Code of Practice for Provision of Programmes to International Students*[21] and there are appropriate in-service supports in areas such as English language, learning skills, information technology skills and such like, to address the particular needs of international learners and enable such learners to successfully participate in the programme.

j) The programme's learners will be well cared for and safe while participating in the programme, (e.g. while at the provider's premises or those of any collaborators involved in provision, the programme's locations of provision including any workplace locations or practice-placement locations).

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Yes	

The panel is satisfied that learners enrolled on the programme are well informed, guided and cared for as the evidence cited throughout this report demonstrates.

Students Handbooks are provided to all learners with information on areas such as how to make a complaint or lodge an appeal. The panel was informed that no formal complaints have been received, due in part to the small number in each cohort where any issues arising can be dealt with. The Panel questioned whether this may also be a result of the awards being unclassified, or the nature of the policies deterring engagement.

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[20] For more information on making reasonable accommodations see www.AHEAD.ie and QQI's Policies, Actions and Procedures for Access, Transfer and Progression for Learners (QQI, restated 2015).

[21] See Code of Practice for Provision of Programmes to International Students (QQI, 2015)

Prior to enrolment, SQT informed the panel that extensive discussions are held with potential learners and their sponsoring companies about the amount of time and work involved so that expectations are clear from the start.

It was evident that SQT provides on-going guidance to learners along the way, with, where possible, face-to-face mentoring or, because of COVID-19, online, through phone calls, emails or other platforms.

Criterion 12. The programme is well managed

a) The programme includes intrinsic governance, quality assurance, learner assessment, and access, transfer and progression procedures that functionally interface with the provider's general or institutional procedures.

b) The programme interfaces effectively with the provider's QQI approved quality assurance procedures. Any proposed incremental changes to the provider's QA procedures required by the programme or programme-specific QA procedures have been developed having regard to QQI's statutory QA guidelines. If the QA procedures allow the provider to approve the centres within the provider that may provide the programme, the procedures and criteria for this should be fit-for-the-purpose of identifying which centres are suited to provide the programme and which are not.

c) There are explicit and suitable programme-specific criteria for selecting persons who meet the programme's staffing requirements and can be added to the programme's complement of staff.

d) There are explicit and suitable programme-specific criteria for selecting physical resources that meet the programmes physical resource requirements, and can be added to the programme's complement of supported physical resources.

e) Quality assurance[22] is intrinsic to the programme's maintenance arrangements and addresses all aspects highlighted by the validation criteria.

f) The programme-specific quality assurance arrangements are consistent with QQI's statutory QA guidelines and use continually monitored completion rates and other sources of information that may provide insight into the quality and standards achieved.

g) The programme operation and management arrangements are coherently documented and suitable.

h) There are sound procedures for interface with QQI certification.

	Satisfactory? (yes, no, partially)	Comment
Diploma in Process Engineering - Lean Six Sigma Black Belt	Partially	

The panel is satisfied that, in general, the programme is well managed. As noted, the QA policies and systems in place are adequate for the in-person mode of delivery and additional QA policies and procedures will be needed for accreditation for blended or virtual learning.

It was not clear however, what specific controls were in place with regards to entitlement to use property, particularly in the online context and the panel has set a condition to be met in this regard.

Condition

it is a condition that information be provided in the programme documentation on the controls in place to ensure entitlement to use property (licencing, intellectual property and copyright).

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[22] See also QQI's Policy on Monitoring (QQI, 2014)

Part 3.   Overall recommendation to QQI

3.1   Diploma in Process Engineering – Lean Six Sigma Black Belt, Level 8

Select one	
	Satisfactory (meaning that it recommends that QQI can be satisfied in the context of unit 2.3) of Core policies and criteria for the validation by QQI of programmes of education and training;
Satisfactory subject to conditions set out.	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e., proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);
	Not satisfactory.

Reasons for the overall recommendation

1. The programme meets the criteria, subject to conditions set out.

Commendations

1. The panel further commends SQT for its highly effective approach to the management of relationships with all stakeholders which has resulted in its tutors and staff being held in high regard and SQT being the provider of choice for a range of organisations across multiple industries.
2. The panel commends SQT's successful transition to emergency remote learning arising from the COVID-19 pandemic and commends SQT on the stepped, cautionary approach that they employed to ensure maintenance of standards and fulfilment of commitments to learners.
3. The panel wishes to commend SQT on its openly apparent commitment to a high quality, student-centred learning experience and the dedicated learner support and mentoring extended to each learner. The positive impact of the extent of student engagement that SQT facilitates through its model of small group sizes was clearly evident and endorsed by stakeholders that the panel met at the virtual visit.

Special Conditions of Validation

1. It is a condition that SQT review and revise the programme descriptor to more fully reflect the information provided to the panel as part of the virtual visit. Specifically, this must include:
   - Evidence of a more encompassing and transparent comparison with programmes of other providers in Ireland and beyond, identifying the similarities and differences with SQT's programme and providing the rationale for SQT's approach. Ideally, such a comparison should include detail of entry requirements, programme delivery model, credits, duration, curriculum content and assessment strategies.
   - Details of the specific education and training need met by the programme (descriptor HET section 3.2)
   - A fuller description of the intended target market for the Level 8 programme (HET descriptor section 3.2)
2. It is a condition that SQT revise the documented programme entry requirements to include the following:

- Confirmation that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.
- The English language assessments that are accepted as verifiable evidence of English language competence be clearly stated.

3. it is a condition that information be provided in the programme documentation on the controls in place to ensure entitlement to use property (licencing, intellectual property and copyright).

Summary of Recommendations

1. It is recommended that the range and extent of supports SQT provides to learners be more fully documented within the SQT programme descriptor to reflect the good practice evidenced in discussion with the SQT team and endorsed by stakeholders, during the panel visit.

2. It is recommended that the teaching and learning (including formative assessment) strategy specific to the programme is fully documented (HET descriptor section 5.6, FET descriptor section 7.5) outlining the pedagogic approach, rooted in good practice as evidenced by the theoretical underpinning which informs it, and describing the nature of teaching, learning and formative assessment activities.

3. It is recommended that SQT view and revise the grading guide included within the programme descriptor to ensure correct alignment with the pass standard of 40%.

Declarations of Evaluators' Interests

It was noted that the Chair of the Panel, Naomi Jackson, Dean of Academic Affairs, CCT College, Dublin, is one of two named CCT representatives on the HECA Board, upon which SQT is also represented. It was also noted that Dr Brían Ó Donnchadha, Subject Expert on the panel, had a professional connection with a SQT Training tutor on a limited basis a number of years ago and is no longer in this position.

This report has been agreed by the evaluation panel and is signed on their behalf by the chairperson.

Panel chairperson: Naomi Jackson   Date: 22/06/2021

Signed:

3.2   Disclaimer

The Report of the External Review Panel contains no assurances, warranties or representations express or implied, regarding the aforesaid issues, or any other issues outside the Terms of Reference.

While QQI has endeavoured to ensure that the information contained in the Report is correct, complete and up-to-date, any reliance placed on such information is strictly at the reader's own risk, and in no event will QQI be liable for any loss or damage (including without limitation, indirect or consequential loss or damage) arising from, or in connection with, the use of the information contained in the Report of the External Evaluation Panel.

Part 4: Proposed programme schedules

Name of Provider:	SQT Training Ltd
Programme Title	Lean Six Sigma Black Belt
Award Title	Diploma in Process Engineering
Stage Exit Award Title[3]	
Modes of Delivery (FT/PT):	PT
Teaching and learning modalities	Classroom, Blended or Virtual

Award Class[4]	Award NFQ level	Award EQF Level	Stage (1, 2, 3, 4, …, or Award Stage):	Stage NFQ Level[2]	Stage EQF Level[2]	Stage Credit (ECTS)	Date Effective	ISCED Subject code
SPA	8		Award					07

Module Title (Up to 70 characters including spaces)	Semester no where applicable. (Semester 1 or Semester2)	Module		Credit Number[5]	Total Student Effort Module (hours)					Allocation Of Marks (from the module assessment strategy)				
		Status[23]	NFQ Level[1] where specified	Credit Units	Total Hours	Class (or equiv) Contact Hours	Directed e-learning	Hours of Independent Learning	Work-based learning effort[24]	C.A. %	Supervised Project %	Supervised practical demonstration	Proctored practical demonstration	Proctored written exam %
DMAIC – Black Belt		M	8	60	1480	180		1300		100				
Special Regulations (Up to 280 characters)														

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[23] Mandatory (m) or elective (E)

[24] Work-based learning effort is not the number of hours in the workplace. For example, a person might spend 35 hours in the workplace as a trainee and this might involve 7 hours of learning effort.

1

Learners must achieve a minimum of 40% in the written report and the oral presentation assessments and must achieve a minimum of 40% in the overall assessment.

Independent Evaluation Report on an Application for Revalidation of a Programme of Education and Training

Part 1. Provider details

Provider name	SQT Training Ltd
Date of site visit	24th March 2021
Date of report	19th April 2021

Section A. Overall recommendations

Certificate in Process Engineering - Lean Six Sigma Green Belt	**Title**	Certificate in Process Engineering - Lean Six Sigma Green Belt
	Award	Special Purpose Award at Level 7 on the NFQ
	Credit	15 ECTS
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	Satisfactory subject to proposed conditions below.

Section B. Expert Panel

Name	Programme review function	Affiliation
Naomi Jackson	Chairperson	Dean of Academic Affairs – CCT College
Dr Olivia McDermott - Hayes	Lecturer / Subject Matter Expert	Lean Six Sigma and Quality Lecturer – NUI Galway
Mary Hickey	Industry Expert / Subject Matter Expert	Process Improvement Manager - Tallaght Hospital
Dr Brían Ó Donnchadha	Expertise on short courses including blended and virtual delivery	CPD Development Officer – NUI Galway
Cathal Curry	Learner representative	NSTEP trained learner representative (recent graduate from DCU)
Louise Fitzpatrick	Independent QA Expert (for validation of new proposed programme, Non-Cas Award Certificate	QA Officer, City of Dublin ETB

	in Lean Six Sigma – Yellow Belt, Level 6, 10 FET Credits.)	
Mary Jennings	Report Writer	Independent Consultant

Section C. Principal Programme

Names of centre(s) where the programme(s) is to be provided	Maximum number of learners *(per centre)*	Minimum number of learners
Public Programmes: These are delivered at central locations, typically hotel venues across Ireland. **In-house Programmes: Such** programmes are usually delivered at the company's own facilities.	15	4

Proposed Enrolment	
Date of first intake	September 2021
Maximum number of annual intakes	40
Maximum total number of learners per intake	15
Programme duration *(months from start to completion)*	7.5 months
Panel Commentary on proposed enrolment:	

Target learner groups
This course is intended for front-line process owners, problem-solving personnel responsible for resolving process problems in day-to-day operations or responsible for leading Continuous Improvement teams. It is intended for those working with Lean Six Sigma Black Belts on major improvement programmes or looking for breakthrough performance in key business metrics. Companies are rapidly realising that a Continuous Improvement Program and skilled practitioners to drive it is no longer optional but an absolute necessity if they are to survive and prosper in the long-term.

Approved countries for provision	Ireland
Delivery mode: Full-time/Part-time	Part-time

The teaching and learning modalities
Face-to-face/classroom.

Brief synopsis of the programme (e.g., who it is for, what is it for, what is involved for learners, what it leads to.)

The programme is designed through the application of the DMAIC cycle to a real-life project. DMAIC is the acronym for Define, Measure, Analyse, Improve, Control cycle and represents a research-based methodology for improving existing processes.

The teaching element of the programme is delivered over 5 days[1] with approximately one day allocated to each phase i.e., Define, Measure, Analyse, Improve, and Control.

Project implementation is a fundamental component of this programme. Applying the theory in practice is a key method to ensuring that the learner has fully understood the theory and achieved the learning outcomes. Learners are required to choose a suitable project to complete using specific guidelines. Support is also provided to organisations with regards to project selection by the programme Tutors.

Learners are assigned a Project Sponsor (also termed Lean Six Sigma Champions) within their organisation. Sponsors provide important resources and support to the learner while undertaking their project. The Learner commences working on their project from the commencement of the programme and must submit their final assessment within 6 months of programme delivery.

Summary of specifications for teaching staff	WTE
SQT have set the following four minimum pre-requisite requirements for all newly appointed Tutors: 1. Hold a third level degree (at a minimum) in a relevant discipline. Where an accreditation / professional body sets additional specific academic or professional qualifications, these must also be adhered to. 2. A pedagogical qualification is required. In the case of experienced Tutors who do not possess a formal pedagogical qualification, this should be completed within one year of Tutor approval. SQT's minimum requirement is the QQI accredited *Training Delivery and Evaluation* minor award (6N3326). 3. 10 years relevant industry experience.	.5/3 (to be c)

Learning Activity		Ratio of staff to learners
Workshops	The programme utilises a range of Teaching & Learning (T&L) methodologies, including traditional classroom teaching, group work, simulations and one to one mentoring. The learning emphasis, regardless of setting, is on problem-based learning. Extensive online materials will be used to support the learning process.	1:15
Creative learning		1:15
Case studies		1:15
Group work		1:15
Problem based learning		1:15
Presentations		1:15
Mentoring		1:1

Panel Commentary on programme outline and staffing:
The information provided is clear and sufficient

[1] In a traditional face-to-face classroom scenario.

Programmes being replaced (applicable to applications for revalidation)		
Code	Title	Last enrolment date
PG22439	Certificate in Process Engineering	28/08/2021

Part 2.   Evaluation against the validation criteria

Criterion 1. The provider is eligible to apply for validation of the programme

<table>
<tr><td colspan="3">

a) The provider meets the prerequisites (section 44(7) of the 2012 Act) to apply for validation of the programme.
b) The application for validation is signed by the provider's chief executive (or equivalent) who confirms that the information provided is truthful and that all the applicable criteria have been addressed.
c) The provider has declared that their programme complies with applicable statutory, regulatory and professional body requirements.[2]

</td></tr>
<tr><td></td><td>**Satisfactory? (yes, no, partially)**</td><td>**Comment**</td></tr>
<tr><td>Certificate in Process Engineering - Lean Six Sigma Green Belt</td><td>Yes</td><td></td></tr>
</table>

As an established provider of programmes SQT has met the prerequisites (section 44(7) of the 2012 Act) to apply for revalidation of this programme. It was noted that SQT has in place procedures for access, transfer and progression as set out in the Programme Document, SQT has also established arrangements for the Protection of Enrolled Learners (PEL) which have been approved by QQI.

SQT provided a copy of the letter to be submitted to QQI with the application for the revalidation of the programme. The letter contained the signature and declaration required under sub-criteria 1b) and 1c).

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[2] This criterion is to ensure the programme can actually be provided and will not be halted on account of breach of the law. The declaration is sought to ensure this is not overlooked but QQI is not responsible for verifying this declaration of enforcing such requirements.

Criterion 2.   The programme objectives and outcomes are clear and consistent with the QQI awards sought

a) The programme aims and objectives are expressed plainly.
b) A QQI award is specified for those who complete the programme.
   (i) Where applicable, a QQI award is specified for each embedded programme.
c) There is a satisfactory rationale for the choice of QQI award(s).
d) The award title(s) is consistent with unit 3.1 of QQI's *Policy and Criteria for Making Awards.*
e) The award title(s) is otherwise legitimate for example it must comply with applicable statutory, regulatory and professional body requirements.
f) The programme title and any embedded programme titles are
   (i) Consistent with the title of the QQI award sought.
   (ii) Clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders.
g) For each programme and embedded programme
   (i) The **minimum intended programme learning outcomes** and any other educational or training objectives of the programme are explicitly specified.[3]
   (ii) The minimum intended programme learning outcomes to qualify for the QQI award sought are **consistent with** the relevant QQI awards standards.
h) Where applicable, the **minimum intended module learning outcomes** are explicitly specified for each of the programme's modules.
i) Any QQI minor awards sought for those who complete the modules are specified, where applicable.

For each minor award specified, the minimum intended module learning outcomes to qualify for the award are consistent with relevant QQI minor awards standards.[4]

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Yes	

The panel found that the aims, objectives and rationale for the programme were expressed clearly, as set out in Section 2.1 of the Programme Document.

It was concluded that the programme and module learning outcomes have been clearly outlined and were appropriate to the level of the award. The title of the programme was deemed to be appropriate and in line with the QQI standard for the award type on the NFQ.

In discussion with the panel at the review meeting, SQT stated the learning outcomes are broad so that they can accommodate the varying needs of different industry sectors, and at the same time, ensure that learners acquire appropriate, transferable skills. It was further stated that the intention is to deliver on the same skill set but different tools may be used to achieve outcomes, for example,

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[3] Other programme objectives, for example, may be to meet the educational or training requirements of a statutory, regulatory or professional body.
[4] Not all modules will warrant minor awards. Minor awards feature strongly in the QQI common awards system however further education and training awards may be made outside this system.

for some learners a critical element might be how have a structured way to manage change while for others, a key area to consider might be the implementation of sustainable energy practices.

The panel is satisfied that the minimum intended programme learning outcomes for the programme were informed by the QQI Generic Awards Standards and have been mapped against these standards.

Criterion 3.   The programme concept, implementation strategy, and its interpretation of QQI awards standards are well informed and soundly based (considering social, cultural, educational, professional and employment objectives)

a) The development of the programme and the intended programme learning outcomes has sought out and taken into account the views of stakeholders such as learners, graduates, teachers, lecturers, education and training institutions, employers, statutory bodies, regulatory bodies, the international scientific and academic communities, professional bodies and equivalent associations, trades unions, and social and community representatives.[5]

b) The interpretation of awards standards has been adequately informed and researched; considering the programme aims and objectives and minimum intended programme (and, where applicable, modular) learning outcomes.
  (i) There is a satisfactory rationale for providing the programme.
  (ii) The proposed programme compares favourably with existing related (comparable) programmes in Ireland and beyond. Comparators should be as close as it is possible to find.
  (iii) There is support for the introduction of the programme (such as from employers, or professional, regulatory or statutory bodies).
  (iv) There is evidence[6] of learner demand for the programme.
  (v) There is evidence of employment opportunities for graduates where relevant[7].
  (vi) The programme meets genuine education and training needs.[8]

c) There are mechanisms to keep the programme updated in consultation with internal and external stakeholders.

d) Employers and practitioners in the cases of vocational and professional awards have been systematically involved in the programme design where the programme is vocationally or professionally oriented.

e) The programme satisfies any validation-related criteria attaching to the applicable awards standards and QQI awards specifications.

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Partially	See condition below.

The panel was informed at the virtual site visit of the evolution of SQT's programmes since initial validation by QQI in 2007. While the programme is now mapped against QQI award criteria, it was stated that the original programme was influenced by the US professional body concerned with quality in industry, American Quality Society (AQS) which has a pragmatic, generally project-based approach to solving issues relating to continuous improvement and quality across a broad range of industries. The need for such programmes has been stated in government industrial and employment policies for many years, SQT told the panel. SQT works with many different sectors in

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[5] Awards standards however detailed rely on various communities for their interpretation. This consultation is necessary if the programme is to enable learners to achieve the standard in its fullest sense.
[6] This might be predictive or indirect.
[7] It is essential to involve employers in the programme development and review process when the programme is vocationally or professionally oriented.
[8] There is clear evidence that the programme meets the **target learners'** education and training needs and that there is a clear demand for the programme.

delivering the programme and indicated that, with a broad-based programme, centred on the completion of a project by learners, with small numbers of learners per cohort and a high level of individual mentoring, it meets the needs of specific industries and learners effectively.

In meeting with industry and learner representatives at the virtual site visit, it was clear that the programme, its overall approach and level of engagement with learners by SQT, was highly valued by them and had enabled organisations to make significant change and, at the same time, provide learners with opportunities for personal and professional development.

It is clear that SQT engage with industry and learner stakeholders on an on-going basis through a variety of methods, including interviews, surveys and informal conversations with a view to ensuring that the programme meets different training needs and address emerging areas of concern such as action on climate change, sustainability of businesses and change management.

The panel found, however, that the information provided in the programme documentation was not sufficiently clear in a number of areas, including the specific education and training needs met by the programme which SQT had outlined to the panel at the visit.

The panel also found that there was insufficient comparison with other providers that might have highlighted the rationale for SQT's approach more clearly and transparently, particularly in relation to such areas as entry requirements, delivery models, curriculum content and assessment strategies. It is a condition that SQT provide this further documentation in the programme descriptor as outlined below. See also Criteria 5, 9,10 for further comment on this point.

Condition

It is a condition that SQT review and revise the programme descriptor to more fully reflect the information provided to the panel as part of the virtual visit. Specifically, this must include:
- Evidence of a more encompassing and transparent comparison with programmes of other providers in Ireland and beyond, identifying the similarities and differences with SQT's programme and providing the rationale for SQT's approach. Ideally, such a comparison should include detail of entry requirements, programme delivery model, credits, duration, curriculum content and assessment strategies.
- Details of the specific education and training need met by the programme (descriptor HET section 3.2)

Commendation

The panel further commends SQT for its highly effective approach to the management of relationships with all stakeholders which has resulted in its tutors and staff being held in high regard and SQT being the provider of choice for a range of organisations across multiple industries.

Criterion 4.   The programme's access, transfer and progression arrangements are satisfactory

a) The information about the programme as well as its procedures for access, transfer and progression are consistent with the procedures described in QQI's policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training. Each of its programme-specific criteria is individually and explicitly satisfied[9].

b) Programme information for learners is provided in plain language. This details what the programme expects of learners and what learners can expect of the programme and that there are procedures to ensure its availability in a range of accessible formats.

c) If the programme leads to a higher education and training award and its duration is designed for native English speakers, then the level of proficiency in English language must be greater or equal to B2+ in the Common European Framework of Reference for Languages (CEFRL[10]) in order to enable learners to reach the required standard for the QQI award.

d) The programme specifies the learning (knowledge, skill and competence) that **target learners** are expected to have achieved before they are enrolled in the programme and any other assumptions about enrolled learners (programme participants).

e) The programme includes suitable procedures and criteria for the **recognition of prior learning** for the purposes of access and, where appropriate, for advanced entry to the programme and for exemptions.

f) The programme title (the title used to refer to the programme):-
   (i) Reflects the core *intended programme learning outcomes*, and is consistent with the standards and purposes of the QQI awards to which it leads, the award title(s) and their class(es).
   (ii) Is learner focused and meaningful to the learners;
   (iii) Has long-lasting significance.

g) The programme title is otherwise legitimate; for example, it must comply with applicable statutory, regulatory and professional body requirements.

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Partially	See condition below

The panel noted that the minimum academic entry requirements for participation on the programme were an advanced or higher certificate in Lean Six Sigma Green Belt Special Purpose Award at Level 6 or higher qualification such as a degree in any discipline or demonstration of achievement at this level through prior learning (APEL).

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[9] Each of the detailed criteria set out in the Policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training must be addressed in the provider's evaluation report. The detailed criteria   are (QQI, restated 2015) arranged under the headings
- Progression and transfer routes
- Entry arrangements
- Information provision

[10] http://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf (accessed 26/09/2015)

SQT informed the panel that discussions in relation to relevant prior learning were conducted with the sponsoring organisation as well as the candidate, with most meeting the academic standard required.

The panel concluded that greater clarity was needed that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.

It was noted that a qualification in mathematics at Leaving Certificate, Level 5, is no longer a requirement for entry onto the programme. In discussion with the panel, SQT stated that while there is frequently a requirement for learners to use statistics as an integral part of the Lean Six Sigma approach, the emphasis is on developing the ability to interpret or analyse stats, rather than learn how to calculate them from raw data. Training in the use of relevant software enabled learned to develop this capacity, where this is relevant as not every project is a data-rich one, the panel was informed.

The panel noted that the minimum language proficiency requirements for entrants whose first language is not English may self-assess their English language competency using the Common European Framework of Reference for Languages (CEFRL) at a level that is greater than or equal to B2+ on the framework. The panel is not satisfied that the self-assessment route is sufficient evidence of competency and verifiable evidence would be a requirement.

Condition

It is a condition that SQT revise the documented programme entry requirements to include the following:

- Confirmation that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.
- The English language assessments that are accepted as verifiable evidence of English language competence be clearly stated.

Criterion 5.   **The programme's written curriculum is well structured and fit-for-purpose**

a) The programme is suitably structured and coherently oriented towards the achievement by learners of its intended programme learning outcomes. The programme (including any stages and modules) is integrated in all its dimensions.
b) In so far as it is feasible the programme provides choice to enrolled learners so that they may align their learning opportunities towards their individual educational and training needs.
c) Each module and stage is suitably structured and coherently oriented towards the achievement by learners of the intended *programme* learning outcomes.
d) The objectives and purposes of each of the programme's elements are clear to learners and to the provider's staff.
e) The programme is structured and scheduled realistically based on sound educational and training principles[11].
f) The curriculum is comprehensively and systematically documented.
g) The credit allocated to the programme is consistent with the difference between the entry standard and minimum intended programme learning outcomes.
h) The credit allocated to each module is consistent with the difference between the module entry standard and minimum intended module learning outcomes.
i) Elements such as practice placement and work-based phases are provided with the same rigour and attentiveness as other elements.
j) The programme duration (expressed in terms of time from initial enrolment to completion) and its fulltime equivalent contact time (expressed in hours) are consistent with the difference between the minimum entry standard and award standard and with the credit allocation.[12]

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Yes	

In general, the panel is satisfied that the curriculum is well structured and fit for purpose.

The panel was informed that the structure of the curriculum is based on enabling learners to develop the capacity to complete a project that has been chosen by their sponsoring employers, using the Lean Six Sigma methodology. The project uses the Lean Six Sigma model as a core element of the curriculum.   This model is effective and works well in practice.

It was noted by the panel that statistics is not taught as a stand-alone part of the curriculum. In discussion with SQT, the panel was informed that most learners have a basic understanding of statistical principles and the emphasis in the programme is on interpretation and analysis of stats. It was stated that there is a range of quality software readily available that guides learners through a roadmap to get the information and data required. SQT provides guides on how to use the software

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[11] This applies recursively to each and every element of the programme from enrolment through to completion.
In the case of a modular programme, the pool of modules and learning pathway constraints (such as any prerequisite and co-requisite modules) is explicit and appropriate to the intended programme learning outcomes.
[12] If the duration is variable, for example, when advanced entry is available, this should be explained and justified

available, the panel was informed. See further comment on this under Criterion 4. Support for this element of the curriculum is also available from tutors.

Criteria 6. **There are sufficient qualified and capable programme staff available to implement the programme as planned**

<table>
<tr><td colspan="3">
a) The specification of the programme's staffing requirements (staff required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme and its defined purpose. The specifications include professional and educational qualifications, licences-to-practise where applicable, experience and the staff/learner ratio requirements. See also criterion 12 c).
b) The programme has an identified complement of staff[13] (or potential staff) who are available, qualified and capable to provide the specified programme in the context of their existing commitments.
c) The programme's complement of staff (or potential staff) (those who support learning including any employer-based personnel) are demonstrated to be competent to enable learners to achieve the intended programme learning outcomes and to assess learners' achievements as required.
d) There are arrangements for the performance of the programme's staff to be managed to ensure continuing capability to fulfil their roles and there are staff development[14] opportunities[15].
e) There are arrangements for programme staff performance to be reviewed and there are mechanisms for encouraging development and for addressing underperformance.
f) Where the programme is to be provided by staff not already in post there are arrangements to ensure that the programme will not enrol learners unless a complement of staff meeting the specifications is in post.
</td></tr>
<tr><td></td><td>**Satisfactory? (yes, no, partially)**</td><td>**Comment**</td></tr>
<tr><td>Certificate in Process Engineering - Lean Six Sigma Green Belt</td><td>Yes</td><td></td></tr>
</table>

The panel was advised that there are sufficient suitably qualified tutors to deliver the programme. All are trained in the Lean Six Sigma methodology, and have many years' experience of working in various sectors. The emphasis in the programme is on completion of a project, with mentoring of each learner during the process, as appropriate. It was evident in the discussion the panel had with learners and graduates of the programme that tutors were readily available and that this was a particular feature of the SQT programme which has small numbers of learners in each cohort.

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[13] Staff here means natural persons required as part of the programme and accountable (directly or indirectly) to the programme's provider, it may for example, include contracted trainers and workplace supervisors.

[14] Development here is for the purpose of ensuring staff remain up-to-date on the discipline itself, on teaching methods or on other relevant skills or knowledge, to the extent that this is necessary to ensure an adequate standard of teaching.

[15] Professional or vocational education and training requires that teaching staff's professional/vocation knowledge is up to date. Being qualified in a discipline does not necessarily mean that a person is currently competent in that discipline. Therefore, performance management and development of professional and vocational staff needs to focus on professional/vocational competence as well as pedagogical competence. Professional development may include placement in industry, for example. In regulated professions it would be expected that there are a suitable number of registered practitioners involved.

SQT stated that current staff had participated in initial training workshops to facilitate the pivot to emergency remote learning during the pandemic.

The strategic intention of SQT is to deliver its programmes on a blended or virtual basis in the future and staff will be upskilled as the need arises. As stated, SQT will be seeking accreditation from QQI for these modes of delivery in due course and the panel indicated that staff re-training or upskills should form part of this process. In general, the panel is satisfied that the curriculum is well structured and fit for purpose.

Criterion 7.   There are sufficient physical resources to implement the programme as planned

a) The specification of the programme's physical resource requirements (physical resources required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme, its defined purpose and its resource/learner-ratio requirements. See also criterion 12 d).

b) The programme has an identified complement of supported physical resources (or potential supported physical resources) that are available in the context of existing commitments on these e.g. availability of:
   (i) suitable premises and accommodation for the learning and human needs (comfort, safety, health, wellbeing) of learners (this applies to all of the programme's learning environments including the workplace learning environment)
   (ii) suitable information technology and resources (including educational technology and any virtual learning environments provided)
   (iii) printed and electronic material (including software) for teaching, learning and assessment
   (iv) suitable specialist equipment (e.g. kitchen, laboratory, workshop, studio) – if applicable
   (v) technical support
   (vi) administrative support
   (vii) company placements/internships – if applicable

c) If versions of the programme are provided in parallel at more than one location each independently meets the location-sensitive validation criteria for each location (for example staffing, resources and the learning environment).

d) There is a five-year plan for the programme. It should address
   (i) Planned intake (first five years) and
   (ii) The total costs and income over the five years based on the planned intake.

e) The programme includes controls to ensure entitlement to use the property (including intellectual property, premises, materials and equipment) required.

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Yes	

The panel noted that SQT has never been a 'bricks and mortar' campus as the mode of delivery is either in-house in client companies or in hotels or conference centres for public programmes. It was stated that SQT put considerable resources into its IT function, providing access to programme materials on Moodle for instance and ensuring that there are sufficient administrative resources to provide support for queries by email, message board or phone calls to learners and client companies.

It was evident to the panel that SQT had made considerable efforts to successfully transition to provide the programme remotely, while ensuring that there had been no compromise on maintaining standards and commitment to learners. The panel commends SQT for its efforts in this regard. The Panel notes the intention for SQT to deliver programmes through blended learning on an itongoing basis. Acknowledging how this differs from emergency remote learning, the panel encourages SQT to consider further enhancements in the use of TEL to promote pedagogic approaches reflecting good practice in online and blended learning delivery.

Commendation

The panel commends SQT's successful transition to emergency remote learning arising from the COVID-19 pandemic and commends SQT on the stepped, cautionary approach that they employed to ensure maintenance of standards and fulfilment of commitments to learners.

Criterion 8.   The learning environment is consistent with the needs of the programme's learners

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a) The programme's physical, social, cultural and intellectual environment (recognising that the environment may, for example, be partly virtual or involve the workplace) including resources and support systems are consistent with the intended programme learning outcomes.

b) Learners can interact with, and are supported by, others in the programme's learning environments including peer learners, teachers, and where applicable supervisors, practitioners and mentors.

c) The programme includes arrangements to ensure that the parts of the programme that occur in the workplace are subject to the same rigours as any other part of the programme while having regard to the different nature of the workplace.

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<tr><td></td><td>Satisfactory? (yes, no, partially)</td><td>Comment</td></tr>
<tr><td>Certificate in Process Engineering - Lean Six Sigma Green Belt</td><td>Yes</td><td></td></tr>
</table>

The panel was informed that there are mechanisms in place to ensure that learners have the appropriate level of learner supports in the current environment. SQT quickly adapted to an online remote learning environment, offering key elements of the programme on a range of platforms to suit different organisations and the learner cohort. These include Zoom, Webx and Microsoft Teams among others. While the SQT team acknowledged some of the difficulties they encountered in making the transition, including working with a range of platforms to deliver content and sometimes poor internet connectively in some areas, the panel was informed that they made every effort to ensure that learners became quickly familiar with using the technology effectively. SQT introduced the idea of 'tech checks' at the beginning of sessions to support learners and used their own IT personnel to support learners.

In discussions with the panel, learners and graduates commented on the positive learning environment provided by SQT and indicated that it was one of the main reasons for enrolling in their programmes. Tutors were readily available to provide support as needed on projects or assignments.

The panel was informed that SQT tutors take a pro-active approach in supporting learners who are undertaking the programme part-time. This includes, for instance, providing timely reminders on upcoming project milestones, encouraging learners to provide informal project reviews and, in a blended learning environment, providing smaller increments of teaching inputs. Further support is provided by encouraging sponsoring companies or champions to take an active interest in the project and so provide learners with in-house backing.

The panel noted that the full range and extent of the supports provided to learners as outlined during the virtual visit and confirmed by the learners and the graduates met had not been fully documented in the programme descriptor document and recommends that this be addressed.

Recommendation

It is recommended that the range and extent of supports SQT provides to learners be more fully documented within the SQT programme descriptor to reflect the good practice evidenced in discussion with the SQT team and endorsed by stakeholders, during the panel visit.

Commendation

The panel wishes to commend SQT on its openly apparent commitment to a high quality, student-centred learning experience and the dedicated learner support and mentoring extended to each learner. The positive impact of the extent of student engagement that SQT facilitates through its model of small group sizes was clearly evident and endorsed by stakeholders that the panel met at the virtual visit.

Criterion 9.   There are sound teaching and learning strategies

a)   The teaching strategies support achievement of the intended programme/module learning outcomes.
b)   The programme provides authentic learning opportunities to enable learners to achieve the intended programme learning outcomes.
c)   The programme enables enrolled learners to attain (if reasonably diligent) the minimum intended programme learning outcomes reliably and efficiently (in terms of overall learner effort and a reasonably balanced workload).
d)   Learning is monitored/supervised.
e)   Individualised guidance, support16 and timely formative feedback is regularly provided to enrolled learners as they progress within the programme.

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Yes	

In general, the panel is satisfied that there are sound teaching and learning strategies in place. It was evident from discussions with learners and graduates during the virtual visit that the approach taken to teaching and learning was valued by them and working in practice.

It was clear from the information supplied by SQT at the virtual visit that the teaching and learning strategies are tailored to each group as well as each to ensure that their needs are met.

 It was noted that the sponsoring company had a large influence over which project the learner took on and that, at times, the sponsoring company champion did not fully understand the process involved and, at times, had unrealistic expectations of what might be achievable within a particular project. It was stated that SQT made every effort to involve the sponsor so that the learner was supported to attain all the learning outcomes of the programme.

The panel is not fully satisfied that the teaching and learning strategy, including formative assessment that is specific to each programme, is fully documented and makes the following condition below.

Recommendation

The teaching and learning (including formative assessment) strategy specific to the programme is fully documented (HET descriptor section 5.6, FET descriptor section 7.5) outlining the pedagogic approach, rooted in good practice as evidenced by the theoretical underpinning which informs it, and describing the nature of teaching, learning and formative assessment activities.

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[16] Support and feedback concerns anything material to learning in the context of the programme. For the avoidance of doubt it includes among other things any course-related language, literacy and numeracy support.

The panel noted that, in the grading guidelines outlined in the programme descriptor, a grade of 4 or 3 out of 10was declared sufficient to obtain a pass standard, whereas it should be clear that to obtain a pass mark the learner must attain a 40% mark.

Recommendation

It is recommended that SQT view and revise the grading guide included within the programme descriptor to ensure correct alignment with the pass standard of 40%.

Criterion 10.   There are sound assessment strategies

a) All assessment is undertaken consistently with *Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards*[17]
b) The programme's assessment procedures interface effectively with the provider's QQI approved quality assurance procedures.
c) The programme includes specific procedures that are fair and consistent for the assessment of enrolled learners to ensure the minimum intended programme/module learning outcomes are acquired by all who successfully complete the programme.[18]
d) The programme includes formative assessment to support learning.
e) There is a satisfactory written **programme assessment strategy** for the programme as a whole and there are satisfactory module assessment strategies for any of its constituent modules.[19]
f) Sample assessment instruments, tasks, marking schemes and related evidence have been provided for each award-stage assessment and indicate that the assessment is likely to be valid and reliable.
g) There are sound procedures for the moderation of summative assessment results.
h) The provider only puts forward an enrolled learner for certification for a particular award for which a programme has been validated if they have been specifically assessed against the standard for that award.[20]

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Yes	

In general, the panel was satisfied with the overall assessment strategy used in the programme. One of the main assessment strategies is if the learner project attained the objectives set and agreed with the sponsoring company. This might be, for instance, costs savings of a particular amount or the development and implementation of a particular change management strategy. No grades are ascribed to projects per se; if the objectives are sufficiently met the learner is nominated for the Special Purpose Award.

As noted in Criterion 9, Teaching and Learning Strategies, it is recommended that the formative assessment used in the programme be more fully documented.

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[17] See the section on transitional arrangements.
[18] This assumes the minimum intended programme/module learning outcomes are consistent with the applicable awards standards.
[19] The programme assessment strategy is addressed in the Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards. See the section on transitional arrangements.
[20] If the award is a QQI CAS compound award it is not necessarily sufficient that the learner has achieved all the components specified in the certification requirements unless at least one of those components is a capstone component (i.e. designed to test the compound learning outcomes).

Criterion 11. Learners enrolled on the programme are well informed, guided and cared for

a)   There are arrangements to ensure that each enrolled learner is fully informed in a timely manner about the programme including the schedule of activities and assessments.

b)   Information is provided about learner supports that are available to learners enrolled on the programme.

c)   Specific information is provided to learners enrolled on the programme about any programme-specific appeals and complaints procedures.

d)   If the programme is modular, it includes arrangements for the provision of effective guidance services for learners on the selection of appropriate learning pathways.

e)   The programme takes into account and accommodates to the differences between enrolled learners, for example, in terms of their prior learning, maturity, and capabilities.

f)   There are arrangements to ensure that learners enrolled on the programme are supervised and individualised support and due care is targeted at those who need it.

g)   The programme provides supports for enrolled learners who have special education and training needs.

h)   The programme makes reasonable accommodations for learners with disabilities[21].

i)   If the programme aims to enrol international students it complies with the *Code of Practice for Provision of Programmes to International Students*[22] and there are appropriate in-service supports in areas such as English language, learning skills, information technology skills and such like, to address the particular needs of international learners and enable such learners to successfully participate in the programme.

j)   The programme's learners will be well cared for and safe while participating in the programme, (e.g. while at the provider's premises or those of any collaborators involved in provision, the programme's locations of provision including any workplace locations or practice-placement locations).

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Yes	

The panel is satisfied that learners enrolled on the programme are well informed, guided and cared for as the evidence cited throughout this report demonstrates.

Students Handbooks are provided to all learners with information on areas such as how to make a complaint or lodge an appeal. The panel was informed that no formal complaints have been received, due in part to the small number in each cohort where any issues arising can be dealt with. The panel questioned whether this may also be a result of the awards being unclassified, or the nature of the policies deterring engagement.

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[21] For more information on making reasonable accommodations see www.AHEAD.ie and QQI's Policies, Actions and Procedures for Access, Transfer and Progression for Learners (QQI, restated 2015).

[22] See Code of Practice for Provision of Programmes to International Students (QQI, 2015)

Prior to enrolment, SQT informed the panel that extensive discussions are held with potential learners and their sponsoring companies about the amount of time and work involved so that expectations are clear from the start.

It was evident that SQT provides on-going guidance to learners along the way, with, where possible, face-to-face mentoring or, because of COVID-19, online, through phone calls, emails or other platforms.

Criterion 12.   The programme is well managed

> a) The programme includes intrinsic governance, quality assurance, learner assessment, and access, transfer and progression procedures that functionally interface with the provider's general or institutional procedures.
> b) The programme interfaces effectively with the provider's QQI approved quality assurance procedures. Any proposed incremental changes to the provider's QA procedures required by the programme or programme-specific QA procedures have been developed having regard to QQI's statutory QA guidelines. If the QA procedures allow the provider to approve the centres within the provider that may provide the programme, the procedures and criteria for this should be fit-for-the-purpose of identifying which centres are suited to provide the programme and which are not.
> c) There are explicit and suitable programme-specific criteria for selecting persons who meet the programme's staffing requirements and can be added to the programme's complement of staff.
> d) There are explicit and suitable programme-specific criteria for selecting physical resources that meet the programmes physical resource requirements, and can be added to the programme's complement of supported physical resources.
> e) Quality assurance[23] is intrinsic to the programme's maintenance arrangements and addresses all aspects highlighted by the validation criteria.
> f) The programme-specific quality assurance arrangements are consistent with QQI's statutory QA guidelines and use continually monitored completion rates and other sources of information that may provide insight into the quality and standards achieved.
> g) The programme operation and management arrangements are coherently documented and suitable.
> h) There are sound procedures for interface with QQI certification.

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering - Lean Six Sigma Green Belt	Partially	See condition below.

The panel is satisfied that, in general, the programme is well managed. As noted, the QA policies and systems in place are adequate for the in-person mode of delivery and additional QA policies and procedures will be needed for accreditation for blended or virtual learning.

It was not clear however, what specific controls were in place with regards to entitlement to use property, particularly in the online context and the panel has set a condition to be met in this regard.

Condition

it is a condition that information be provided in the programme documentation on the controls in place to ensure entitlement to use property (licencing, intellectual property and copyright).

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[23] See also QQI's Policy on Monitoring (QQI, 2014)

Part 3.   Overall recommendation to QQI

3.1   Certificate in Process Engineering - Lean Six Sigma Green Belt

Select one	
	Satisfactory (meaning that it recommends that QQI can be satisfied in the context of unit 2.3) of Core policies and criteria for the validation by QQI of programmes of education and training;
Satisfactory subject to conditions proposed.	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e., proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);
	Not satisfactory.

Reasons for the overall recommendation

1. The programme meets the criteria, subject to conditions set out.

Commendations

1. The panel further commends SQT for its highly effective approach to the management of relationships with all stakeholders which has resulted in its tutors and staff being held in high regard and SQT being the provider of choice for a range of organisations across multiple industries.
2. The panel commends SQT's successful transition to emergency remote learning arising from the COVID-19 pandemic and commends SQT on the stepped, cautionary approach that they employed to ensure maintenance of standards and fulfilment of commitments to learners.
3. The panel wishes to commend SQT on its openly apparent commitment to a high quality, student-centred learning experience and the dedicated learner support and mentoring extended to each learner. The positive impact of the extent of student engagement that SQT facilitates through its model of small group sizes was clearly evident and endorsed by stakeholders that the panel met at the virtual visit.

Special Conditions of Validation

1. It is a condition that SQT review and revise the programme descriptor to more fully reflect the information provided to the panel as part of the virtual visit. Specifically, this must include:
   - Evidence of a more encompassing and transparent comparison with programmes of other providers in Ireland and beyond, identifying the similarities and differences with SQT's programme and providing the rationale for SQT's approach. Ideally, such a comparison should include detail of entry requirements, programme delivery model, credits, duration, curriculum content and assessment strategies.
   - Details of the specific education and training need met by the programme (descriptor HET section 3.2)
2. It is a condition that SQT revise the documented programme entry requirements to include the following:
   - Confirmation that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.
   - The English language assessments that are accepted as verifiable evidence of English language competence be clearly stated.

3. it is a condition that information be provided in the programme documentation on the controls in place to ensure entitlement to use property (licencing, intellectual property and copyright).

Summary of Recommendations

1. It is recommended that the range and extent of supports SQT provides to learners be more fully documented within the SQT programme descriptor to reflect the good practice evidenced in discussion with the SQT team and endorsed by stakeholders, during the panel visit.
2. It is recommended that the teaching and learning (including formative assessment) strategy specific to the programme is fully documented (HET descriptor section 5.6, FET descriptor section 7.5) outlining the pedagogic approach, rooted in good practice as evidenced by the theoretical underpinning which informs it, and describing the nature of teaching, learning and formative assessment activities.
3. It is recommended that SQT view and revise the grading guide included within the programme descriptor to ensure correct alignment with the pass standard of 40%.

Declarations of Evaluators' Interests

It was noted that the Chair of the Panel, Naomi Jackson, Dean of Academic Affairs, CCT College, Dublin, is one of two named CCT representatives on the HECA Board, upon which SQT is also represented. It was also noted that Dr Brían Ó Donnchadha, Subject Expert on the panel, had a professional connection with a SQT Training tutor on a limited basis a number of years ago and is no longer in this position.

This report has been agreed by the evaluation panel and is signed on their behalf by the chairperson.

Panel chairperson: Naomi Jackson   Date: 22/06/2021

Signed:

3.2   Disclaimer

The Report of the External Review Panel contains no assurances, warranties or representations express or implied, regarding the aforesaid issues, or any other issues outside the Terms of Reference.

While QQI has endeavoured to ensure that the information contained in the Report is correct, complete and up-to-date, any reliance placed on such information is strictly at the reader's own risk, and in no event will QQI be liable for any loss or damage (including without limitation, indirect or consequential loss or damage) arising from, or in connection with, the use of the information contained in the Report of the External Evaluation Panel.

Part 4: Proposed programme schedules

Name of Provider:	SQT Training Ltd
Programme Title	Lean Six Sigma Green Belt
Award Title	Certificate in Process Engineering
Stage Exit Award Title[3]	
Modes of Delivery (FT/PT):	PT
Teaching and learning modalities	Classroom, Blended or Virtual

Award Class[4]	Award NFQ level	Award EQF Level	Stage (1, 2, 3, 4, …, or Award Stage):	Stage NFQ Level[2]	Stage EQF Level[2]	Stage Credit (ECTS)	Date Effective	ISCED Subject code
SPA	7		Award					07

Module Title (Up to 70 characters including spaces)	Semester no where applicable. (Semester 1 or Semester2)	Module		Credit Number[5]	Total Student Effort Module (hours)					Allocation Of Marks (from the module assessment strategy)				
		Status[24]	NFQ Level[1] where specified	Credit Units	Total Hours	Class (or equiv) Contact Hours	Directed e-learning	Hours of Independent Learning	Work-based learning effort[25]	C.A. %	Supervised Project %	Proctored practical demonstration	Proctored written exam %
DMAIC – Green Belt		M	7	15	375	45		330		100			
Special Regulations (Up to 280 characters)													

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[24] Mandatory (m) or elective (E)

[25] Work-based learning effort is not the number of hours in the workplace. For example, a person might spend 35 hours in the workplace as a trainee and this might involve 7 hours of learning effort.

![QQI logo] Quality and Qualifications Ireland
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

Independent Evaluation Report on an Application for Revalidation of a Programme of Education and Training

Part 1.   Provider details

Provider name	SQT Training Ltd
Date of site visit	24th March 2021
Date of report	19th April 2021

Section A.   Overall recommendations

Principal programme	**Title**	Certificate in Process Engineering Lean Six Sigma Green Belt
	Award	Special Purpose Award
	Credit	10 ECTS
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	Satisfactory, subject to proposed conditions as outlined below.

Section B.   Expert Panel

Independent Panel Members

Name	Programme review function	Affiliation
Naomi Jackson	Chairperson	Dean of Academic Affairs – CCT College
Dr Olivia McDermott - Hayes	Lecturer / Subject Matter Expert	Lean Six Sigma and Quality Lecturer – NUI Galway
Mary Hickey	Industry Expert / Subject Matter Expert	Process Improvement Manager - Tallaght Hospital

Dr Brían Ó Donnchadha	Expertise on short courses including blended and virtual delivery	CPD Development Officer – NUI Galway
Cathal Curry	Learner representative	NSTEP trained learner representative (recent graduate from DCU)
Louise Fitzpatrick	Independent QA Expert (for validation of new proposed programme, Non-Cas Award Certificate in Lean Six Sigma – Yellow Belt, Level 6, 10 FET Credits.)	QA Officer, City of Dublin ETB
Mary Jennings	Report Writer	Independent Consultant

All members of the independent panel declared their independence of SQT Training Ltd and completed the conflict of interest declaration.

Section C.   Certificate in Process Engineering Lean Six Sigma Green Belt

Names of centre(s) where the programme(s) is to be provided	Maximum number of learners (per centre)	Minimum number of learners
Public Programmes: These are delivered at central locations, typically hotel venues across Ireland. **In-house Programmes:** Such programmes are usually delivered at the company's own facilities	15	4

Proposed Enrolment	
Date of first intake	September 2021
Maximum number of annual intakes	40
Maximum total number of learners per intake	15
Programme duration (months from start to completion)	4 months
Panel Commentary on proposed enrolment:	

Target learner groups
This programme was specifically developed for those who are unemployed and in response to the Springboard initiative. SQT was a provider of LSS Springboard programmes in 2011 but withdrew in 2012 when the addition of a workplace element was introduced as a Springboard requirement. The programme continues to remain valid as there are situations in which employers cannot provide a project option and it is of benefit to those who are unemployed. Furthermore, it provides an exit award for learners who for reasons outside of their control cannot complete their original project. The primary objective of this programme is to develop graduates who possess the pre-requisite knowledge of theory and practice of Lean Six Sigma to enable them to participate in process improvement efforts in their organisations. The taught element of this programme is identical to SQT's Lean Six Sigma Green Belt Level 7 programme and learner cohorts are combined for delivery. The key difference is the assessment which is a case study versus a project.

Approved countries for provision	Ireland
Delivery mode: Full-time/Part-time	Part-time

The teaching and learning modalities
In-company and face-to-face

Brief synopsis of the programme (e.g., who it is for, what is it for, what is involved for learners, what it leads to.)

The teaching element of the programme is delivered over 5 days[1] with approximately one day allocated to each phase i.e., Define, Measure, Analyse, Improve, and Control. Completing a case study is a central part of the programme. Applying the theory in practice is one of the key methods of ensuring that the learner has fully understood the theory. Learners attending the programme are assigned a case study requiring them to solve a problem in a hypothetical company. Case studies are generic in nature but are assigned according to the background of the learner (i.e., Manufacturing, Service, Logistics, Construction etc.). The Learner must within 10 weeks of programme completion submit the completed case study covering all aspects of the DMAIC methodology.

Summary of specifications for teaching staff	WTE
SQT have set the following four minimum pre-requisite requirements for Tutors: 1. Hold a third level degree (at a minimum) in a relevant discipline. Where an accreditation / professional body sets additional specific academic or professional qualifications, these must also be adhered to. 2. A pedagogical qualification is required. In the case of experienced Tutors who do not possess a formal pedagogical qualification, this should be completed within one year of Tutor approval. SQT's minimum requirement is the QQI accredited *Training Delivery and Evaluation* minor award (6N3326). 3. 10 years relevant industry experience.	.3

Learning Activity		Ratio of learners to teaching staff
Workshops	The programme utilises a range of T&L methodologies including traditional classroom teaching, group work, simulations and one to one mentoring. The learning emphasis regardless of setting is upon problem-based learning. Online materials will be used to support learning.	1:15
Creative learning		1:15
Case studies		1:15
Group work		1:15
Problem based learning		1:15
Presentations		1:15

Programmes being replaced (applicable to applications for revalidation)		
Code	Title	Last enrolment date
PG22434	Certificate in Process Engineering	31/08/2021

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[1] In a traditional face-to-face classroom scenario.

Part 2. Evaluation against the validation criteria

Criterion 1. **The provider is eligible to apply for validation of the programme**

a)	The provider meets the prerequisites (section 44(7) of the 2012 Act) to apply for validation of the programme.
b)	The application for validation is signed by the provider's chief executive (or equivalent) who confirms that the information provided is truthful and that all the applicable criteria have been addressed.
c)	The provider has declared that their programme complies with applicable statutory, regulatory and professional body requirements.[2]

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Yes	

As an established provider of programmes SQT has met the prerequisites (section 44(7) of the 2012 Act) to apply for revalidation of this programme. It was noted that SQT has in place procedures for access, transfer and progression as set out in the Programme Document. SQT has also established arrangements for the Protection of Enrolled Learners (PEL) which have been approved by QQI.

SQT provided a copy of the letter to be submitted to QQI with the application for the revalidation of the programme. The letter contained the signature and declaration required under sub-criteria 1b) and 1c)

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[2] This criterion is to ensure the programme can actually be provided and will not be halted on account of breach of the law. The declaration is sought to ensure this is not overlooked but QQI is not responsible for verifying this declaration of enforcing such requirements.

Criterion 2.   **The programme objectives and outcomes are clear and consistent with the QQI awards sought**

a) The programme aims and objectives are expressed plainly.
b) A QQI award is specified for those who complete the programme.
    (i) Where applicable, a QQI award is specified for each embedded programme.
c) There is a satisfactory rationale for the choice of QQI award(s).
d) The award title(s) is consistent with unit 3.1 of QQI's *Policy and Criteria for Making Awards.*
e) The award title(s) is otherwise legitimate for example it must comply with applicable statutory, regulatory and professional body requirements.
f) The programme title and any embedded programme titles are
    (i) Consistent with the title of the QQI award sought.
    (ii) Clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders.
g) For each programme and embedded programme
    (i) The **minimum intended programme learning outcomes** and any other educational or training objectives of the programme are explicitly specified.[3]
    (ii) The minimum intended programme learning outcomes to qualify for the QQI award sought are **consistent with** the relevant QQI awards standards.
h) Where applicable, the **minimum intended module learning outcomes** are explicitly specified for each of the programme's modules.
i) Any QQI minor awards sought for those who complete the modules are specified, where applicable.

For each minor award specified, the minimum intended module learning outcomes to qualify for the award are consistent with relevant QQI minor awards standards.[4]

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Yes	

The panel found that the aims, objectives and rationale for the programme were expressed clearly, as set out in Section 2.1 of the Programme Document.

It was concluded that the programme and module learning outcomes have been clearly outlined and were appropriate to the level of the award. The title of the programme was deemed to be appropriate and in line with the QQI standard for the award type on the NFQ.

In discussion with the panel at the review meeting, SQT stated the learning outcomes are broad so that they can accommodate the varying needs of different industry sectors, and at the same time, ensure that learners acquire appropriate, transferable skills. It was further stated that the intention is to deliver on the same skill set but different tools may be used to achieve outcomes. Use of

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[3] Other programme objectives, for example, may be to meet the educational or training requirements of a statutory, regulatory or professional body.
[4] Not all modules will warrant minor awards. Minor awards feature strongly in the QQI common awards system however further education and training awards may be made outside this system.

appropriate case studies is one of the main tools used in this programme, whereas, in Lean Six Sigma at Level 7, one of the main tools used is a group project.

The panel is satisfied that the minimum intended programme learning outcomes for the programme were informed by the QQI Generic Awards Standards and have been mapped against these standards.

Criterion 3.   **The programme concept, implementation strategy, and its interpretation of QQI awards standards are well informed and soundly based (considering social, cultural, educational, professional and employment objectives)**

a) The development of the programme and the intended programme learning outcomes has sought out and taken into account the views of stakeholders such as learners, graduates, teachers, lecturers, education and training institutions, employers, statutory bodies, regulatory bodies, the international scientific and academic communities, professional bodies and equivalent associations, trades unions, and social and community representatives.[5]

b) The interpretation of awards standards has been adequately informed and researched; considering the programme aims and objectives and minimum intended programme (and, where applicable, modular) learning outcomes.
   (i)   There is a satisfactory rationale for providing the programme.
   (ii) The proposed programme compares favourably with existing related (comparable) programmes in Ireland and beyond. Comparators should be as close as it is possible to find.
   (iii) There is support for the introduction of the programme (such as from employers, or professional, regulatory or statutory bodies).
   (iv) There is evidence[6] of learner demand for the programme.
   (v)   There is evidence of employment opportunities for graduates where relevant[7].
   (vi) The programme meets genuine education and training needs.[8]

c) There are mechanisms to keep the programme updated in consultation with internal and external stakeholders.

d) Employers and practitioners in the cases of vocational and professional awards have been systematically involved in the programme design where the programme is vocationally or professionally oriented.

e) The programme satisfies any validation-related criteria attaching to the applicable awards standards and QQI awards specifications.

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Partially	

The panel was informed at the virtual site visit of the evolution of SQT's programmes since initial validation by QQI in 2007. While the programme is now mapped against QQI award criteria, it was stated that the original programme was influenced by the US professional body concerned with quality in industry, American Quality Society (AQS) which has a pragmatic, generally project-based approach to solving issues relating to continuous improvement and quality across a broad range of industries. The need for such programmes has been stated in government industrial and employment policies for many years, including the Springboard Programme, for people who are

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[5] Awards standards however detailed rely on various communities for their interpretation. This consultation is necessary if the programme is to enable learners to achieve the standard in its fullest sense.

[6] This might be predictive or indirect.

[7] It is essential to involve employers in the programme development and review process when the programme is vocationally or professionally oriented.

[8] There is clear evidence that the programme meets the **target learners'** education and training needs and that there is a clear demand for the programme.

unemployed, SQT told the panel. SQT works with many different sectors in delivering the programme and indicated that, with a broad-based programme, centred on using case studies as a tool to acquire knowledge and skills, it meets the needs of specific industries and learners who are new to the Lean Six Sigma methodology.

In meeting with industry and learner representatives at the virtual site visit, it was clear that the programme, its overall approach and level of engagement with learners by SQT, was highly valued by and had enabled organisations to make significant change and, at the same time, provide learners with opportunities for personal and professional development.

It is clear that SQT engage with industry and learner stakeholders on an on-going basis through a variety of methods, including interviews, surveys and informal conversations with a view to ensuring that the programme meets different training needs and address emerging areas of concern such as action on climate change, sustainability of businesses and change management.

The panel found, however, that the information provided in the programme documentation was not sufficiently clear in a number of areas, including the specific education and training need met by the programme which SQT had outlined to the panel at the visit.

The panel also found that there was insufficient comparison with other providers that might have highlighted the rationale for SQT's approach more clearly and transparently, particularly in relation to such areas as entry requirements, delivery models, curriculum content and assessment strategies. It is a condition that SQT provide this further documentation in the programme descriptor as outlined below. See also Criteria 5, 9,10 for further comment on this point.

Condition

It is a condition that SQT review and revise the programme descriptor to more fully reflect the information provided to the panel as part of the virtual visit. Specifically, this must include:
- Evidence of a more encompassing and transparent comparison with programmes of other providers in Ireland and beyond, identifying the similarities and differences with SQT's programme and providing the rationale for SQT's approach. Ideally, such a comparison should include detail of entry requirements, programme delivery model, credits, duration, curriculum content and assessment strategies.
- Details of the specific education and training need met by the programme (descriptor HET section 3.2)

Commendation

The panel further commends SQT for its highly effective approach to the management of relationships with all stakeholders which has resulted in its tutors and staff being held in high regard and SQT being the provider of choice for a range of organisations across multiple industries.

Criterion 4.   **The programme's access, transfer and progression arrangements are satisfactory**

a) The information about the programme as well as its procedures for access, transfer and progression are consistent with the procedures described in QQI's policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training. Each of its programme-specific criteria is individually and explicitly satisfied[9].

b) Programme information for learners is provided in plain language. This details what the programme expects of learners and what learners can expect of the programme and that there are procedures to ensure its availability in a range of accessible formats.

c) If the programme leads to a higher education and training award and its duration is designed for native English speakers, then the level of proficiency in English language must be greater or equal to B2+ in the Common European Framework of Reference for Languages (CEFRL[10]) in order to enable learners to reach the required standard for the QQI award.

d) The programme specifies the learning (knowledge, skill and competence) that **target learners** are expected to have achieved before they are enrolled in the programme and any other assumptions about enrolled learners (programme participants).

e) The programme includes suitable procedures and criteria for the **recognition of prior learning** for the purposes of access and, where appropriate, for advanced entry to the programme and for exemptions.

f) The programme title (the title used to refer to the programme):-
   (i) Reflects the core *intended programme learning outcomes*, and is consistent with the standards and purposes of the QQI awards to which it leads, the award title(s) and their class(es).
   (ii) Is learner focused and meaningful to the learners;
   (iii) Has long-lasting significance.

g) The programme title is otherwise legitimate; for example, it must comply with applicable statutory, regulatory and professional body requirements.

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Partially	

The panel noted that the minimum academic entry requirements for participation on the programme was a Leaving Certificate (Level 5) or demonstration of achievement at this level through prior learning (APEL).

[9] Each of the detailed criteria set out in the Policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training must be addressed in the provider's evaluation report. The detailed criteria   are (QQI, restated 2015) arranged under the headings
- Progression and transfer routes
- Entry arrangements
- Information provision

[10] http://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf (accessed 26/09/2015)

SQT informed the panel that discussions in relation to relevant prior learning were conducted with the sponsoring organisation as well as the candidate, with most meeting the academic standard required.

The panel concluded that greater clarity was needed that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.

It was noted that a qualification in mathematics at Leaving Certificate, Level 5, is no longer a requirement for entry onto the programme. In discussion with the panel, SQT stated that while there is frequently a requirement for learners to use statistics as an integral part of the Lean Six Sigma approach, the emphasis is on developing the ability to interpret or analyse stats, rather than learn how to calculate them from raw data. Training in the use of relevant software enabled learners to develop this capacity, where this is relevant at this level.

The panel noted that the minimum language proficiency requirements whose first language is not English may self-assess their English language competency using the Common European Framework of Reference for Languages (CEFRL) at a level that is greater than or equal to B2+ on the framework. The panel is not satisfied that the self-assessment route is sufficient evidence of competency and verifiable evidence would be a requirement.

Condition

It is a condition that SQT revise the documented programme entry requirements to include the following:

- Confirmation that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.
- Confirmation of the minimum attributes for general learning, noting that these should normally be evidenced to a Level 5 standard.
- The English language assessments that are accepted as verifiable evidence of English language competence be clearly stated.

Criterion 5. **The programme's written curriculum is well structured and fit-for-purpose**

a)	The programme is suitably structured and coherently oriented towards the achievement by learners of its intended programme learning outcomes. The programme (including any stages and modules) is integrated in all its dimensions.
b)	In so far as it is feasible the programme provides choice to enrolled learners so that they may align their learning opportunities towards their individual educational and training needs.
c)	Each module and stage is suitably structured and coherently oriented towards the achievement by learners of the intended *programme* learning outcomes.
d)	The objectives and purposes of each of the programme's elements are clear to learners and to the provider's staff.
e)	The programme is structured and scheduled realistically based on sound educational and training principles[11].
f)	The curriculum is comprehensively and systematically documented.
g)	The credit allocated to the programme is consistent with the difference between the entry standard and minimum intended programme learning outcomes.
h)	The credit allocated to each module is consistent with the difference between the module entry standard and minimum intended module learning outcomes.
i)	Elements such as practice placement and work-based phases are provided with the same rigour and attentiveness as other elements.
j)	The programme duration (expressed in terms of time from initial enrolment to completion) and its fulltime equivalent contact time (expressed in hours) are consistent with the difference between the minimum entry standard and award standard and with the credit allocation.[12]

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Yes	

In general, the panel is satisfied that the curriculum is well structured and fit for purpose.

The panel was informed that the structure of the curriculum is based on enabling learners to develop the capacity to work on aspects of a process-improvement project that has been chosen by their sponsoring employers, using the Lean Six Sigma methodology. It was noted that, at Level 6, the assessment strategy was based on assessing work on a case study rather than on completion of a project and that this was the key difference between this programme and a similar programme at Level 7 on the NFQ. The case study demonstrates the core elements of the Lean Six Sigma methodology. This model is effective and works well in practice.

It was noted by the panel that statistics is not taught as a stand-alone part of the curriculum. In discussion with SQT, the panel was informed that most learners have a basic understanding of

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[11] This applies recursively to each and every element of the programme from enrolment through to completion.
In the case of a modular programme, the pool of modules and learning pathway constraints (such as any prerequisite and co-requisite modules) is explicit and appropriate to the intended programme learning outcomes.
[12] If the duration is variable, for example, when advanced entry is available, this should be explained and justified

statistical principles and the emphasis in the programme is on interpretation and analysis of stats where relevant. It was stated that there is a range of quality software readily available that guides learners through a roadmap to get the information and data required. SQT provides guides on how to use the software available, the panel was informed. See further comment on this under Criterion 4. Support for this element of the curriculum is also available from tutors.

Criterion 6.   **There are sufficient qualified and capable programme staff available to implement the programme as planned**

<table>
<tr><td colspan="3">
a) The specification of the programme's staffing requirements (staff required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme and its defined purpose. The specifications include professional and educational qualifications, licences-to-practise where applicable, experience and the staff/learner ratio requirements. See also criterion 12 c).

b) The programme has an identified complement of staff[13] (or potential staff) who are available, qualified and capable to provide the specified programme in the context of their existing commitments.

c) The programme's complement of staff (or potential staff) (those who support learning including any employer-based personnel) are demonstrated to be competent to enable learners to achieve the intended programme learning outcomes and to assess learners' achievements as required.

d) There are arrangements for the performance of the programme's staff to be managed to ensure continuing capability to fulfil their roles and there are staff development[14] opportunities[15].

e) There are arrangements for programme staff performance to be reviewed and there are mechanisms for encouraging development and for addressing underperformance.

f) Where the programme is to be provided by staff not already in post there are arrangements to ensure that the programme will not enrol learners unless a complement of staff meeting the specifications is in post.
</td></tr>
<tr><td></td><td>**Satisfactory? (yes, no, partially)**</td><td>**Comment**</td></tr>
<tr><td>Certificate in Process Engineering Lean Six Sigma Green Belt</td><td>Yes</td><td></td></tr>
</table>

The panel was advised that there are sufficient suitably qualified tutors to deliver the programme. All are trained in the Lean Six Sigma methodology, and have many years' experience of working in various sectors. The emphasis in the programme is on completion of a project, with mentoring of each learner during the process, as appropriate. It was evident in the discussion the panel had with learners and graduates of the programme that tutors were readily available and that this was a particular feature of the SQT programme which has small numbers of learners in each cohort.

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[13] Staff here means natural persons required as part of the programme and accountable (directly or indirectly) to the programme's provider, it may for example, include contracted trainers and workplace supervisors.

[14] Development here is for the purpose of ensuring staff remain up-to-date on the discipline itself, on teaching methods or on other relevant skills or knowledge, to the extent that this is necessary to ensure an adequate standard of teaching.

[15] Professional or vocational education and training requires that teaching staff's professional/vocation knowledge is up to date. Being qualified in a discipline does not necessarily mean that a person is currently competent in that discipline. Therefore, performance management and development of professional and vocational staff needs to focus on professional/vocational competence as well as pedagogical competence. Professional development may include placement in industry, for example. In regulated professions it would be expected that there are a suitable number of registered practitioners involved.

SQT stated that current staff had participated in initial training workshops to facilitate the pivot to emergency remote learning during the pandemic.

The strategic intention of SQT is to deliver its programmes on a blended or virtual basis in the future and staff will be upskilled as the need arises. As stated, SQT will be seeking accreditation from QQI for these modes of delivery in due course and the panel indicated that staff re-training or upskills should form part of this process.

Criterion 7. **There are sufficient physical resources to implement the programme as planned**

<table>
<tr><td>

a) The specification of the programme's physical resource requirements (physical resources required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme, its defined purpose and its resource/learner-ratio requirements. See also criterion 12 d).

b) The programme has an identified complement of supported physical resources (or potential supported physical resources) that are available in the context of existing commitments on these e.g. availability of:

   (i) suitable premises and accommodation for the learning and human needs (comfort, safety, health, wellbeing) of learners (this applies to all of the programme's learning environments including the workplace learning environment)

   (ii) suitable information technology and resources (including educational technology and any virtual learning environments provided)

   (iii) printed and electronic material (including software) for teaching, learning and assessment

   (iv) suitable specialist equipment (e.g. kitchen, laboratory, workshop, studio) – if applicable

   (v) technical support

   (vi) administrative support

   (vii) company placements/internships – if applicable

c) If versions of the programme are provided in parallel at more than one location each independently meets the location-sensitive validation criteria for each location (for example staffing, resources and the learning environment).

d) There is a five-year plan for the programme. It should address

   (i) Planned intake (first five years) and

   (ii) The total costs and income over the five years based on the planned intake.

e) The programme includes controls to ensure entitlement to use the property (including intellectual property, premises, materials and equipment) required.

</td></tr>
</table>

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Yes	

The panel noted that SQT has never been a 'bricks and mortar' campus as the mode of delivery is either in-house in client companies or in hotels or conference centres for public programmes. It was stated that SQT put considerable resources into its IT function, providing access to programme materials on Moodle for instance and ensuring that there are sufficient administrative resources to provide support for queries by email, message board or phone calls to learners and client companies.

It was evident to the panel that SQT had made considerable efforts to successfully transition to provide the programme remotely, while ensuring that there had been no compromise on maintaining standards and commitment to learners. The panel commends SQT for its efforts in this regard. The Panel notes the intention for SQT to deliver programmes through blended learning on an ongoing basis. Acknowledging how this differs from emergency remote learning, the panel encourages SQT to consider further enhancements in the use of TEL to promote pedagogic approaches reflecting good practice in online and blended learning delivery.

Commendation

The panel commends SQT's successful transition to emergency remote learning arising from the COVID-19 pandemic and commends SQT on the stepped, cautionary approach that they employed to ensure maintenance of standards and fulfilment of commitments to learners.

Criterion 8.   **The learning environment is consistent with the needs of the programme's learners**

<table>
<tr><td colspan="3">
a) The programme's physical, social, cultural and intellectual environment (recognising that the environment may, for example, be partly virtual or involve the workplace) including resources and support systems are consistent with the intended programme learning outcomes.
b) Learners can interact with, and are supported by, others in the programme's learning environments including peer learners, teachers, and where applicable supervisors, practitioners and mentors.
c) The programme includes arrangements to ensure that the parts of the programme that occur in the workplace are subject to the same rigours as any other part of the programme while having regard to the different nature of the workplace.
</td></tr>
<tr><td></td><td>**Satisfactory? (yes, no, partially)**</td><td>**Comment**</td></tr>
<tr><td>Certificate in Process Engineering Lean Six Sigma Green Belt</td><td>Yes</td><td></td></tr>
</table>

The panel was informed that there are mechanisms in place to ensure that learners have the appropriate level of learner supports in the current environment. SQT quickly adapted to an online remote learning environment, offering key elements of the programme on a range of platforms to suit different organisations and the learner cohort. These include Zoom, Webx and Microsoft Teams among others. While the SQT team acknowledged some of the difficulties they encountered in making the transition, including working with a range of platforms to deliver content and sometimes poor internet connectively in some areas, the panel was informed that they made every effort to ensure that learners became quickly familiar with using the technology effectively. SQT introduced the idea of 'tech checks' at the beginning of sessions to support learners and used their own IT personnel to support learners.

In discussions with the panel, learners and graduates commented on the positive learning environment provided by SQT and indicated that it was one of the main reasons for enrolling in their programmes. Tutors were readily available to provide support as needed on projects or assignments.

The panel was informed that SQT tutors take a pro-active approach in supporting learners who are undertaking the programme part-time. This includes, for instance, providing timely reminders on upcoming assignment milestones, encouraging learners to provide informal progress reviews and, in a blended learning environment, providing smaller increments of teaching inputs. Further support is provided by encouraging sponsoring companies or champions to take an active interest in the project and so provide learners with in-house backing.

The panel noted that the full range and extent of the supports provided to learners as outlined during the virtual visit and confirmed by the learners and the graduates met had not been fully documented in the programme descriptor document and recommends that this be addressed.

Recommendation

It is recommended that the range and extent of supports SQT provides to learners be more fully documented within the SQT programme descriptor to reflect the good practice evidenced in discussion with the SQT team and endorsed by stakeholders, during the panel visit.

Commendation

The panel wishes to commend SQT on its openly apparent commitment to a high quality, student-centred learning experience and the dedicated learner support and mentoring extended to each learner. The positive impact of the extent of student engagement that SQT facilitates through its model of small group sizes was clearly evident and endorsed by stakeholders that the panel met at the virtual visit.

Criterion 9.   **There are sound teaching and learning strategies**

a)	The teaching strategies support achievement of the intended programme/module learning outcomes.	
b)	The programme provides authentic learning opportunities to enable learners to achieve the intended programme learning outcomes.	
c)	The programme enables enrolled learners to attain (if reasonably diligent) the minimum intended programme learning outcomes reliably and efficiently (in terms of overall learner effort and a reasonably balanced workload).	
d)	Learning is monitored/supervised.	
e)	Individualised guidance, support16 and timely formative feedback is regularly provided to enrolled learners as they progress within the programme.	

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Yes	

In general, the panel is satisfied that there are sound teaching and learning strategies in place. It was evident from discussions with learners and graduates during the virtual visit that the approach taken to teaching and learning was valued by them and working in practice.

It was clear from the information supplied by SQT at the virtual visit that the teaching and learning strategies are tailored to each group as well as each individual to ensure that their needs are met.

It was stated that SQT made every effort to involve the sponsor so that the learner was supported to attain all the learning outcomes of the programme.

The panel is not fully satisfied that the teaching and learning strategy, including formative assessment that is specific to each programme, is fully documented and makes the following recommendation below.

Recommendation

The teaching and learning (including formative assessment) strategy specific to the programme is fully documented (HET descriptor section 5.6, FET descriptor section 7.5) outlining the pedagogic approach, rooted in good practice as evidenced by the theoretical underpinning which informs it, and describing the nature of teaching, learning and formative assessment activities

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[16] Support and feedback concerns anything material to learning in the context of the programme. For the avoidance of doubt it includes among other things any course-related language, literacy and numeracy support.

Criterion 10.   **There are sound assessment strategies**

<table>
<tr><td colspan="2">a) All assessment is undertaken consistently with *Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards*[17]</td></tr>
<tr><td colspan="2">b) The programme's assessment procedures interface effectively with the provider's QQI approved quality assurance procedures.</td></tr>
<tr><td colspan="2">c) The programme includes specific procedures that are fair and consistent for the assessment of enrolled learners to ensure the minimum intended programme/module learning outcomes are acquired by all who successfully complete the programme.[18]</td></tr>
<tr><td colspan="2">d) The programme includes formative assessment to support learning.</td></tr>
<tr><td colspan="2">e) There is a satisfactory written **programme assessment strategy** for the programme as a whole and there are satisfactory module assessment strategies for any of its constituent modules.[19]</td></tr>
<tr><td colspan="2">f) Sample assessment instruments, tasks, marking schemes and related evidence have been provided for each award-stage assessment and indicate that the assessment is likely to be valid and reliable.</td></tr>
<tr><td colspan="2">g) There are sound procedures for the moderation of summative assessment results.</td></tr>
<tr><td colspan="2">h) The provider only puts forward an enrolled learner for certification for a particular award for which a programme has been validated if they have been specifically assessed against the standard for that award.[20]</td></tr>
</table>

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Yes	

In general, the panel was satisfied with the overall assessment strategy used in the programme Special Purpose Award. It was noted that the main assessment tool was the completion of an analysis of a relevant case study with 75% of marks going to this element and 25% to a written examination. The case study, although a simulation of a particular problem, provided a way for learners to see the Lean Six Sigma model in practice and to demonstrate in their analysis of the case study that they had understood the methodology. It was further stated that the case studies used by SQT were altered sufficiently on a regular basis to ensure that that cohort had fresh material to use in their assignments. The panel is satisfied with this approach.

The panel noted that Multiple Choice Questionnaire (MCQ) was one of the assessment tools used on this programme. The panel found that the design methodology employed by SQT is not sufficiently clear and recommends that this be more fully described by SQT.

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[17] See the section on transitional arrangements.

[18] This assumes the minimum intended programme/module learning outcomes are consistent with the applicable awards standards.

[19] The programme assessment strategy is addressed in the Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards. See the section on transitional arrangements.

[20] If the award is a QQI CAS compound award it is not necessarily sufficient that the learner has achieved all the components specified in the certification requirements unless at least one of those components is a capstone component (i.e. designed to test the compound learning outcomes).

Recommendation

It is recommendation that SQT full describe the design methodology for the MCQ assessment methodology used on the programme.

As noted in Criterion 9, Teaching and Learning Strategies, it is recommended that the formative assessment used in the programme be more fully documented.

The panel noted that, in the grading guidelines outlined in the programme descriptor, a grade of 4 or 3 out of 10 was deemed sufficient to obtain a pass standard, whereas it should be clear that to obtain a pass mark the learner must attain a 40% mark.

Recommendation

It is recommended that SQT view and revise the grading guide included within the programme descriptor to ensure correct alignment with the pass standard of 40%.

Criterion 11.   **Learners enrolled on the programme are well informed, guided and cared for**

<table>
<tr><td>a)</td><td>There are arrangements to ensure that each enrolled learner is fully informed in a timely manner about the programme including the schedule of activities and assessments.</td></tr>
<tr><td>b)</td><td>Information is provided about learner supports that are available to learners enrolled on the programme.</td></tr>
<tr><td>c)</td><td>Specific information is provided to learners enrolled on the programme about any programme-specific appeals and complaints procedures.</td></tr>
<tr><td>d)</td><td>If the programme is modular, it includes arrangements for the provision of effective guidance services for learners on the selection of appropriate learning pathways.</td></tr>
<tr><td>e)</td><td>The programme takes into account and accommodates to the differences between enrolled learners, for example, in terms of their prior learning, maturity, and capabilities.</td></tr>
<tr><td>f)</td><td>There are arrangements to ensure that learners enrolled on the programme are supervised and individualised support and due care is targeted at those who need it.</td></tr>
<tr><td>g)</td><td>The programme provides supports for enrolled learners who have special education and training needs.</td></tr>
<tr><td>h)</td><td>The programme makes reasonable accommodations for learners with disabilities[21].</td></tr>
<tr><td>i)</td><td>If the programme aims to enrol international students it complies with the Code of Practice for Provision of Programmes to International Students[22] and there are appropriate in-service supports in areas such as English language, learning skills, information technology skills and such like, to address the particular needs of international learners and enable such learners to successfully participate in the programme.</td></tr>
<tr><td>j)</td><td>The programme's learners will be well cared for and safe while participating in the programme, (e.g. while at the provider's premises or those of any collaborators involved in provision, the programme's locations of provision including any workplace locations or practice-placement locations).</td></tr>
</table>

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Yes	

The panel is satisfied that learners enrolled on the programme are well informed, guided and cared for as the evidence cited throughout this report demonstrates.

Students Handbooks are provided to all learners with information on areas such as how to make a complaint or lodge an appeal. The panel was informed that no formal complaints have been received, due in part to the small number in each cohort where any issues arising can be dealt with.

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[21] For more information on making reasonable accommodations see www.AHEAD.ie and QQI's Policies, Actions and Procedures for Access, Transfer and Progression for Learners (QQI, restated 2015).
[22] See Code of Practice for Provision of Programmes to International Students (QQI, 2015)

Prior to enrolment, SQT informed the panel that extensive discussions are held with potential learners and their sponsoring companies about the amount of time and work involved so that expectations are clear from the start.

It was evident that SQT provides on-going guidance to learners along the way, with, where possible, face-to-face mentoring or, because of COVID-19, online, through phone calls, emails or other platforms.

Criterion 12. **The programme is well managed**

a)	The programme includes intrinsic governance, quality assurance, learner assessment, and access, transfer and progression procedures that functionally interface with the provider's general or institutional procedures.
b)	The programme interfaces effectively with the provider's QQI approved quality assurance procedures. Any proposed incremental changes to the provider's QA procedures required by the programme or programme-specific QA procedures have been developed having regard to QQI's statutory QA guidelines. If the QA procedures allow the provider to approve the centres within the provider that may provide the programme, the procedures and criteria for this should be fit-for-the-purpose of identifying which centres are suited to provide the programme and which are not.
c)	There are explicit and suitable programme-specific criteria for selecting persons who meet the programme's staffing requirements and can be added to the programme's complement of staff.
d)	There are explicit and suitable programme-specific criteria for selecting physical resources that meet the programmes physical resource requirements, and can be added to the programme's complement of supported physical resources.
e)	Quality assurance[23] is intrinsic to the programme's maintenance arrangements and addresses all aspects highlighted by the validation criteria.
f)	The programme-specific quality assurance arrangements are consistent with QQI's statutory QA guidelines and use continually monitored completion rates and other sources of information that may provide insight into the quality and standards achieved.
g)	The programme operation and management arrangements are coherently documented and suitable.
h)	There are sound procedures for interface with QQI certification.

	Satisfactory? (yes, no, partially)	Comment
Certificate in Process Engineering Lean Six Sigma Green Belt	Partially	See condition below.

The panel is satisfied that, in general, the programme is well managed. As noted, the QA policies and systems in place are adequate for the in-person mode of delivery and additional QA policies and procedures will be needed for accreditation for blended or virtual learning.

It was not clear however, what specific controls were in place with regards to entitlement to use property, particularly in the online context and the panel has set a condition to be met in this regard.

Condition

It is a condition that information be provided in the programme documentation on the controls in place to ensure entitlement to use property (licencing, intellectual property and copyright).

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[23] See also QQI's Policy on Monitoring (QQI, 2014)

Part 3.   Overall recommendation to QQI

3.1   Certificate in Process Engineering Lean Six Sigman Green Belt

Select one	
	Satisfactory (meaning that it recommends that QQI can be satisfied in the context of unit 2.3) of Core policies and criteria for the validation by QQI of programmes of education and training;
Satisfactory subject to proposed conditions	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e., proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);
	Not satisfactory.

Reasons for the overall recommendation

1. The programme meets the criteria, subject to conditions set out.

Commendations

1. The panel further commends SQT for its highly effective approach to the management of relationships with all stakeholders which has resulted in its tutors and staff being held in high regard and SQT being the provider of choice for a range of organisations across multiple industries.
2. The panel commends SQT's successful transition to emergency remote learning arising from the COVID-19 pandemic and commends SQT on the stepped, cautionary approach that they employed to ensure maintenance of standards and fulfilment of commitments to learners.
3. The panel wishes to commend SQT on its openly apparent commitment to a high quality, student-centred learning experience and the dedicated learner support and mentoring extended to each learner. The positive impact of the extent of student engagement that SQT facilitates through its model of small group sizes was clearly evident and endorsed by stakeholders that the panel met at the virtual visit.

Special Conditions of Validation

1. It is a condition that SQT review and revise the programme descriptor to more fully reflect the information provided to the panel as part of the virtual visit. Specifically, this must include:
   - Evidence of a more encompassing and transparent comparison with programmes of other providers in Ireland and beyond, identifying the similarities and differences with SQT's programme and providing the rationale for SQT's approach. Ideally, such a comparison should include detail of entry requirements, programme delivery model, credits, duration, curriculum content and assessment strategies.
   - Details of the specific education and training need met by the programme (descriptor HET section 3.2)
2. It is a condition that SQT revise the documented programme entry requirements to include the following:
   - Confirmation that APEL applications are assessed against the award standards at the level equivalent to the minimum academic entry requirement.
   - The English language assessments that are accepted as verifiable evidence of English language competence be clearly stated.

3. it is a condition that information be provided in the programme documentation on the controls in place to ensure entitlement to use property (licencing, intellectual property and copyright).

Summary of Recommendations

1. It is recommended that the range and extent of supports SQT provides to learners be more fully documented within the SQT programme descriptor to reflect the good practice evidenced in discussion with the SQT team and endorsed by stakeholders, during the panel visit.

2. It is recommendation that SQT full describe the design methodology for the MCQ assessment methodology used on the programme.

3. It is recommended that the teaching and learning (including formative assessment) strategy specific to the programme is fully documented (HET descriptor section 5.6, FET descriptor section 7.5) outlining the pedagogic approach, rooted in good practice as evidenced by the theoretical underpinning which informs it, and describing the nature of teaching, learning and formative assessment activities.

4. It is recommended that SQT view and revise the grading guide included within the programme descriptor to ensure correct alignment with the pass standard of 40%.

Declarations of Evaluators' Interests

It was noted that the Chair of the Panel, Naomi Jackson, Dean of Academic Affairs, CCT College, Dublin, is one of two named CCT representatives on the HECA Board, upon which SQT is also represented. It was also noted that Dr Brían Ó Donnchadha, Subject Expert on the panel, had a professional connection with a SQT Training tutor on a limited basis a number of years ago and is no longer in this position.

This report has been agreed by the evaluation panel and is signed on their behalf by the chairperson.

Panel chairperson: Naomi Jackson   Date: 22.06.2021

Signed:

3.2   Disclaimer

The Report of the External Review Panel contains no assurances, warranties or representations express or implied, regarding the aforesaid issues, or any other issues outside the Terms of Reference.

While QQI has endeavoured to ensure that the information contained in the Report is correct, complete and up-to-date, any reliance placed on such information is strictly at the reader's own risk, and in no event will QQI be liable for any loss or damage (including without limitation, indirect or consequential loss or damage) arising from, or in connection with, the use of the information contained in the Report of the External Evaluation Panel.

Part 4: Proposed programme schedules

Name of Provider:	SQT Training Ltd
Programme Title	Lean Six Sigma Green Belt
Award Title	Certificate in Process Engineering
Stage Exit Award Title[3]	
Modes of Delivery (FT/PT):	PT
Teaching and learning modalities	Classroom, Blended or Virtual

Award Class[4]	Award NFQ level	Award EQF Level	Stage (1, 2, 3, 4, …, or Award Stage):	Stage NFQ Level[2]	Stage EQF Level[2]	Stage Credit (ECTS)	Date Effective	ISCED Subject code
SPA	6		Award					07

Module Title (Up to 70 characters including spaces)	Semester no where applicable. (Semester 1 or Semester2)	Module		Credit Number[5]		Total Student Effort Module (hours)					Allocation Of Marks (from the module assessment strategy)				
		Status[24]	NFQ Level[1] where specified	Credit Units	Total Hours	Class (or equiv) Contact Hours	Directed e-learning	Hours of Independent learning	Work-based learning effort[25]	C.A. %	Supervised Project %	Proctored practical demonstration	Proctored written exam %
DMAIC – Green Belt		M	6	10	250	40		210		100			
Special Regulations (Up to 280 characters)														

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[24] Mandatory (m) or elective (E)

[25] Work-based learning effort is not the number of hours in the workplace. For example, a person might spend 35 hours in the workplace as a trainee and this might involve 7 hours of learning effort.