Personnel Certification

Swiss Association for Quality

Federation of Swiss IT Experts

A program of the .ch series.

D464 EN

Expert FSIE™ Q

Quality Management

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Authored by: quality@fsie.ch (Specialized Commission, Lead vacant)

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1. Scope

The certification is processed according to the generic SAQ Expert FSIE™ certification scheme (D500) and detailed regulation (D420 including all referenced documents therein). The document at hand describes the specific practices (competences) and requirements for the program **Quality.**

These must be demonstrated by work testimonials, advanced education graduations, the handed-in case study and in the oral exam. The re-certification encompasses work testimonials and continuing education requirements.

Additional to traditional specialisation certifications, each Expert FSIE™
- requires basic IT competences common for each of the specialisations
- knows how to efficiently collaborate with other IT experts (context and role models)
- can integrate his existing diploma and certifications into the FSIE title
- adheres to a common Code of Conduct
- follows the same pattern of periodical competences updates by practice and education

2. Summary of the Profile Quality

The Expert FSIE™ Quality strives for efficient and reliable processes in development and operation of IT Systems, for continuous improvement of the processes and IT Systems, and conformance to internal and external standards. He/she develops policies and quality management systems (QMS), checks their effectiveness and devises corrective and preventive measures.

swissICT "Berufe der ICT" profiles covered:

- ICT-Quality Manager
- Software Engineer (Quality)
- Systems Engineer (Quality)
- ICT-Architect (Quality)
- Process Manager
- Organisations Manager

Agile profiles covered:

- Expert IT Quality
- Agile Coach

3. Catalog of IT Quality Practices and Collaboration Requirements

The practices are further refined in an FSIE-internal document which contains detailed competences descriptions, methods, techniques and sample examination questions.

3.1. IT Quality Practices

Practice-ID	Title	Description
qBOC 01	Strategy-driven objectives	Understand business strategy, IT strategy and enterprise quality policy to define quality governance objectives and procedures
qBOC 02	standard requirements on quality	Understand standard requirements on quality
qBOC 03	IT development processes	Engineer IT system development processes and their management
qBOC 04	Reviewing and testing processes	Engineer IT system reviewing and testing processes and their management
qBOC 05	IT operation processes	Engineer IT system operation processes and their management
qBOC 06	QMS	Develop quality management systems (QMS) based on current standards and aligned to company objectives. The contexts may be IT overall, or local in projects and/or agile settings.
qBOC 07	Audit	Audit and assess the effectiveness of processes
qsBOC 08	Quality and Security minded ICT-Organisation	Cooperation and collaboration of the quality and security experts for the holistic view and design of a "quality and security minded" ICT-Organisation
qBOC 09	Quality indicators	Define process and IT system quality indicators and setup their monitoring in the QMS context
qBOC 10	Continuous improvement	Establish and operate a continuous improvement process in the QMS context
qBOC 11	IT quality reporting	Report process and IT systems quality (indicators) to all management levels in the QMS context
qBOC 12	QMS reporting	Report overall quality management system (QMS) effectiveness to top management

The IT Expert FSIE™ Quality is required to reach a level of competence according to Bloom[1] of 4, 5 or 6 (analysis, synthesis, evaluation) for 10 out of the 12 practices. The 2 remaining he/she should master at level 3 (application).

3.2. Quality Collaboration Requirements

Role	Expert Quality collaboration with role
Expert BRIDGE	Typically, the Expert Quality is involved in the preparation and execution of a project by the Expert BRIDGE. The project quality management (sometimes including test management) is taken over. The project management and business analysis processes are audited and continually improved involving the Experts BRIDGE
Expert Engineering	Tasks of software/hardware design, development and test are delegated to the respective experts in coordination with an eventually involved Expert BRIDGE. The engineering processes are audited and continually improved involving the Experts Engineering
Expert Security	The tasks of security management, monitoring, measurement and reporting for achieving the enterprise security objectives are delegated to and coordinated with the respective experts.
Expert Strategy	The Expert Quality takes inputs and coordinates with this expert. The respective expert delegates strategic IT quality topics to the Expert Quality.
Expert Operations	IT operational and platform tasks are delegated to or coordinated with these respective experts. The IT operations processes are audited and continually improved involving the Experts Operations.
Expert Management	IT Management / CIO is involved in the strategic positioning of IT quality and receives the IT quality and QMS reports (as are possibly all other management roles up to CEO as per enterprise directives)

When delegating, holders of the titles Expert FSIE™ <xy> in provider lead roles are preferred.

An Expert FSIE™ Quality must demonstrate the understanding and practical application of the above collaborations with
- Strategy
- Engineering
- Operations
- BRIDGE (Project)

[1] https://en.wikipedia.org/wiki/Bloom%27s_taxonomy

3.3. IT Quality Work Context Requirements

"Run the enterprise" / operations tasks	The Expert FSIE™ Quality is involved in governance activities related to IT quality. He/she defines and implements the IT QMS. With a quality-risk-based approach, the Expert FSIE™ Quality guides operational as well as development units regarding IT quality. He/she performs quality assessments and serves as point of contact for internal and external (quality) auditors.
"Change the enterprise" / Project tasks	The Expert FSIE™ Quality is involved in all phases of a project. During project initiation and requirement specification phases, he/she ensures the specification of appropriate quality requirements which typically are non-functional and reviews them for compliance with company policies. During the solution design phase, he/she guides the reviews. In the implementation phase, the Expert FSIE™ Quality plans and monitors the testing activities and eventually gives the quality sign-off. Finally, in the first operational phase, he/she ensures that proper incident and resolution management processes are in place.

An Expert FSIE™ Quality must demonstrate to have taken the lead in both of the 2 above-mentioned contexts at least once.

3.4. The Expert FSIE™ Quality in the FSIE profiles collaboration and work model

An Expert FSIE™ Quality has an equally operations-oriented (continuing duties and tasks) and projects/changes (ITIL: service creation) role:
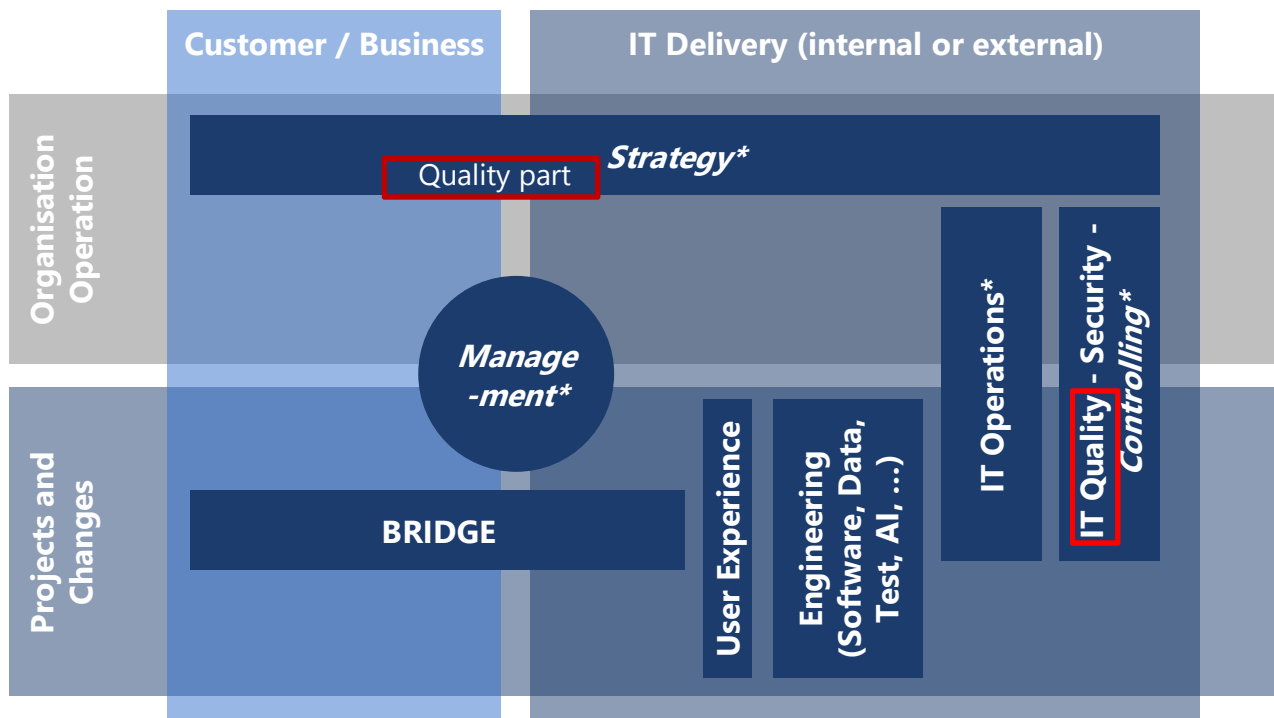
4. Work Testimonials

The work testimonials are reported using the standard regulation and electronic form (D450) valid for every Expert FSIE™.

4.1. Requirements

The required minimum is 40% capacity in the past 6 years, i.e. 3'840 hours of practical work covering the 12 practices as per chapter 3.1 not older than 6 years must be reported.

For 10 practices, he/she must have a record of >=160 hours.

The collaboration requirements as per chapter 3.2 must be demonstrated.

The work context requirements as per chapter 3.3 must be demonstrated.

5. Advanced Education Requirements

The Expert FSIE™ Quality has graduated >=15 attributed Quality ECTS worth of any of the following advanced education programs (or certificates). The graduation certificates must be provided (scanned).

Education Provider	Name	Link	Attributed Quality ECTS
FH/ZHAW	CAS Qualitätsmanagement	X	10
ASQ	ASQ Certified Software Quality Engineer	_	8
	ASQ Six Sigma Yellow Belt	_	2
	ASQ Six Sigma Green Belt	_	4
	ASQ Six Sigma Black Belt	_	7
SAQ Qualicon	EOQ / SAQ Quality System Manager	_	4
	EOQ / SAQ Quality Manager	_	3
	EOQ / SAQ Quality Professional	_	2
	EOQ / SAQ TQM Leader	_	4
	SAQ Excellence Leader	_	3
	SAQ Prozess Manager	_	4
	SAQ Qualitäts-Assistent	_	3
	SAQ Quality System Organisator	_	2
	SAQ Quality System Auditor	_	3
	SAQ Quality Lead Auditor	_	5

Important Note: The list above only encompasses Swiss Quality advanced education offerings known to the FSIE Quality specialisation commission. If a candidate is a graduate of a non-listed course that presumably covers all or some of the Quality practices, he/she shall submit it and the FSIE Quality specialisation commission will assess the validity and eventually attributable ECTS, e.g. for other international certificates based on the same standards . Also, if you are a provider of advanced education that is not listed, please send it in for assessment and listing to security@fsie.ch.

The graduations must not be older than 6 years or maintained in the past 6 years, if the advanced education has a re-certification regulation.

Temporary regulation:
The non-re-certifiable graduations can be older than 6 years. Also, they can stem from no longer existing education providers and/or be titles/programs that do no longer exist but were appropriately covering the educational aspects of the Quality practices as listed in chapter 3.1.

6. Case Study

The case study is written using the standard template (D423) valid for every Expert FSIE™.

Specific Quality requirement:
The case study must encompass the development and implementation of an IT QMS (qBOC 06) i.e. a holistic IT Quality Management System overall or in a project context.

7. Oral Exam

The oral exam is conducted using the standard structure and assessment scheme valid for every Expert FSIE™ (D421).

6 of the 12 practices must be covered in the 2nd and 3rd exam parts of the case study and specialisation questionings.

8. Re-Certification

The re-certification requirements are checked every 3 years.

8.1. Continued work testimonials

The continued work testimonials are reported using the standard regulation and electronic form (D450) valid for every Expert FSIE™.

The required minimum is 40% capacity in the past 3 years, i.e. 1'920 hours of practical work covering the 9 practices as per chapter 3.1 not older than 3 years must be reported by the Expert FSIE™ Quality.

For 10 of the 12 practices, he/she must have a record of >=80 hours.

The collaboration requirements as per chapter 3.2 must be demonstrated.

The work context requirements as per chapter 3.3 must be demonstrated.

If feasible, a onetime extension of 0.5 years to reach the above requirements can be granted.

8.2. Continuing education

The Expert FSIE™ Quality must achieve the standard amount of 18 CEP with IT quality-specific or generic continuing education in 3 years conforming to the FSIE CEP regulation (D440). Note: 18 CEP can be achieved by attending 9 full-day IT quality or generic refresher courses. However, the CEP regulation attributes CEP also to other continuing education measures.

If feasible, a onetime extension of 0.5 years to reach the above requirement can be granted.

9. Title

- The title is valid for 3 years after the initial certification and after each successfully completed re-certification.

- As long as valid, the holder is licensed to use the following title:

[IT] Expert FSIE™ Quality
[IT] Expert FSIE™ Agile Coach

Note: [] denotes optional parts, ¦ separates options.

For the other language variants refer to D464_DE, D464_FR and D464_IT