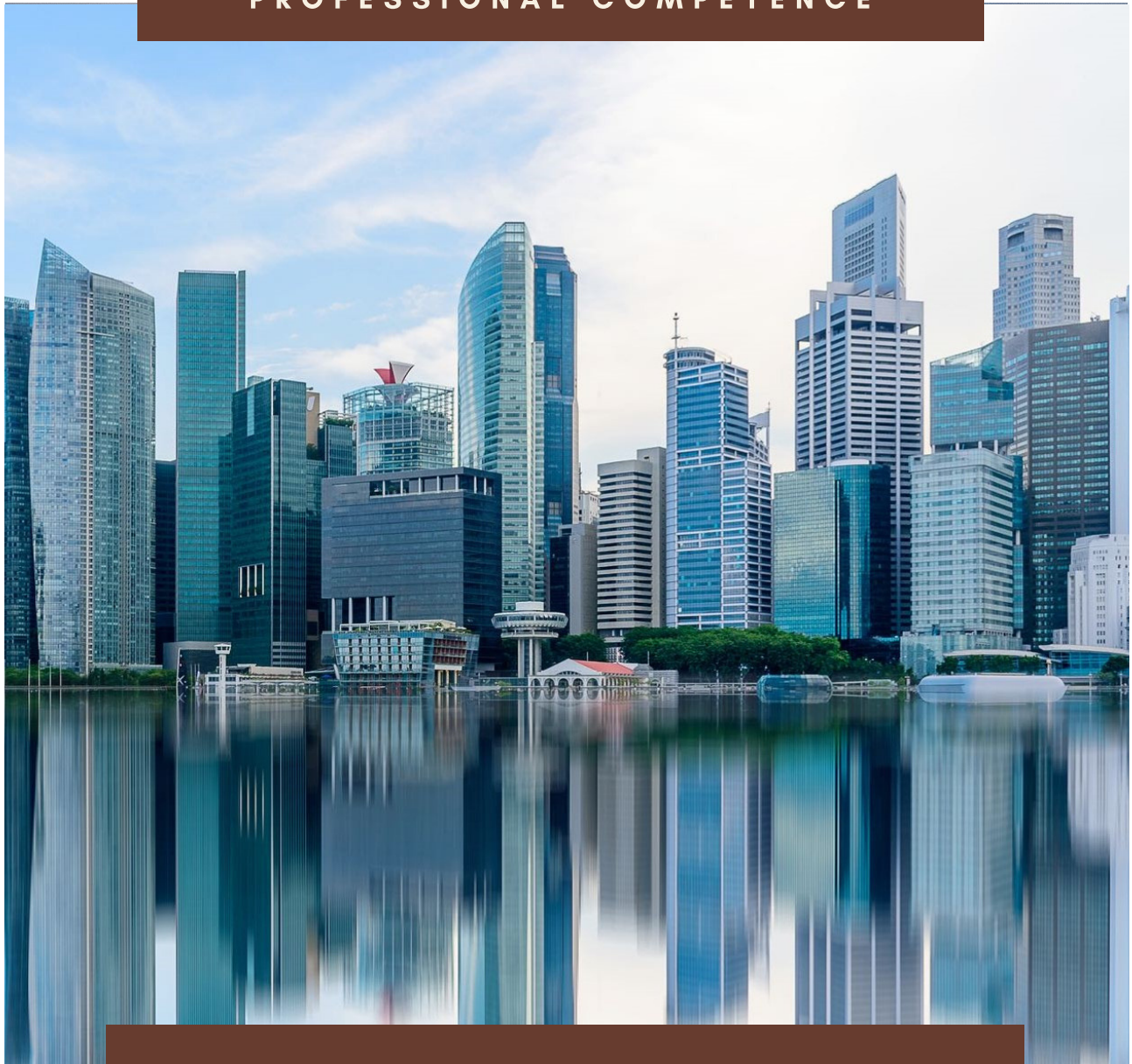


SINGAPORE INSTITUTE OF SURVEYORS AND VALUERS

QUANTITY SURVEYING DIVISION

ASSESSMENT OF
PROFESSIONAL COMPETENCE



CANDIDATE'S GUIDE FOR GRADUATE ROUTE



CONTENTS

INTRODUCTION

PAGE 5

Purpose of this guide

Routes to membership

COMPETENCY REQUIREMENTS

PAGE 6

Areas of approved competencies

DEFINITIONS OF COMPETENCY

PAGE 7

Mandatory competency in conduct rules, ethics and professional practice

Core competencies

Optional competencies

Submission requirements

ASSESSMENT OF PROFESSIONAL COMPETENCE ("APC") INTERVIEW

PAGE 15

Purpose

Submission of application and payment of fee

Interview format



CONTENTS

RESULT OF APC INTERVIEW

PAGE 17

APPENDICES

PAGE 18

*Appendix A – QS Professional Pathway/ QS
Professional Competencies
Appendix B – Competencies checklist
Appendix C – Summary of experience and
competencies gained/ report*

FOREWORD

The Assessment of Professional Competence (APC) is the process to achieve the Professional Quantity Surveyor's (PQS) qualification with the institute.

The achievement of the professional qualification is a mark of the individual's professional competencies supported by broad-based professional experience in addition to the knowledge attained from the academic studies.

This APC guide serves to provide the essential information about the APC process that the APC candidates should know and support them through this professional qualification pathway.

It is therefore crucial for the APC candidates to have good knowledge of the APC requirements and the expectation of their submission and assessment.

I congratulate you for taking the first step to embark on this professional qualification journey and I hope you will find the APC an enriching process for both your professional and personal development perspective.

Should you have any feedback or suggestion relating to APC, please do share with us on QS-APC@sisv.org.sg.

A handwritten signature in blue ink, consisting of stylized initials 'KS' followed by a horizontal line.

Khoo Sze Boon
President
Quantity Surveying Division (2017/2019)

1 INTRODUCTION

1.1 Purpose of This Guide

- 1.1.1** This Guide outlines the procedures to be fulfilled by a Graduate Candidate (“Candidate”) who wishes to qualify as a Professional Quantity Surveyor by meeting the requirements of the Assessment of Professional Competence (“APC”) in the Quantity Surveying Division of the Singapore Institute of Surveyors and Valuers (“SISV”).
- 1.1.2** APC ensures that the Candidate seeking membership has a broad-based practical experience and competencies in addition to the knowledge attained from academic studies.
- 1.1.3** Candidates shall study this Guide carefully and any related inquiries can be directed to SISV.
- 1.1.4** Candidates shall read this Guide in conjunction with the Code of Professional Conduct of SISV Quantity Surveying division as published in SISV website: <http://www.sisv.org.sg/>.

1.2 Routes to Membership – Appendix A

- 1.2.1** The following are the routes leading to membership (“MSISV”):
- Graduate of Singapore Institute of Surveyors and Valuers Accredited Degree Course.
 - Graduate of Pacific Association of Quantity Surveyors (“PAQS”) Accredited Degree Course.
 - Graduate of Singapore Institute of Surveyors and Valuers Accredited Degree Course not within the accredited period.
 - Graduate of Non-Singapore Institute of Surveyors and Valuers Accredited Degree Course.
 - Mature Candidate.
 - Member of Professional Institute with SISV Reciprocity Arrangement.
- 1.2.2** All the above routes require the Candidate to complete an APC.
- 1.2.3** For full details of the requirements including submissions on experience and competencies for Graduate Candidate’s route, please refer to SISV.

2 COMPETENCY REQUIREMENTS

2.1 Areas of Approved Competencies

2.1.1 A Candidate must be able to demonstrate an appropriate level of competence during the APC Interview, listed as follows:

- Mandatory Competency in Conduct Rules, Ethics and Professional Practice (as defined in Section 3.1).
- At least three of the Core Competencies (as defined in Section 3.2).
- At least one of the Optional Competencies (as defined in Section 3.3).

2.1.2 The level of competence requirements are as follows:

- Level 1 - Knowledge and understanding.
- Level 2 - Application of knowledge and understanding.
- Level 3 - Ability to provide reasoned and rationale advice demonstrating Candidate's in-depth understanding and professional knowledge.

2.1.3 Candidates shall give careful thought to the selection and combination of competencies as such decision reflects their judgement and skills required of a Professional Quantity Surveyor.

2.1.4 At the APC interview, the appointed assessors will take these choices into consideration.

2.1.5 It is the Candidate's responsibility to acquire full understanding of the requirements and conditions to be met relating to the APC process.

3 DEFINITIONS OF COMPETENCY

3.1 Mandatory Competency in Conduct Rules, Ethics and Professional Practice

Candidate is expected to:

- 3.1.1** Demonstrate personal commitment to the SISV's Code of Professional Conduct;
- 3.1.2** Demonstrate knowledge, understanding and application of the twelve (12) Professional and Ethical Standards appended hereunder designed to assist and guide the Professional Quantity Surveyors in upholding their professionalism.

The twelve (12) Professional and Ethical Standards are as follows:

(a) Act honourably

Never put your own gain above the welfare of your client or other to whom you have a professional responsibility. Always consider the wider interests of society in your judgement.

(b) Act with integrity

Be trustworthy in all that you do – never deliberately mislead, whether by withholding or distorting information.

(c) Be open and transparent in your dealings

Share the full facts with your clients, making things as plain and intelligible as possible.

(d) Be accountable for all your actions

Take full responsibility for your actions and do not blame others if things go wrong.

(e) Know and act within your limitations

Be aware of the limits of your competence and do not be tempted to work beyond these. Never commit to more than you can deliver.

(f) **Be objective at all times**

Give clear and appropriate advice. Never let sentiments or your own interests cloud your judgement.

(g) **Always treat others with respect**

Never discriminate against others.

(h) **Set a good example**

Remember that both your public and private behaviour could affect your own, SISV's and other members' reputation.

(i) **Have the courage to make a stand**

Be prepared to act if you suspect a risk to safety or health or malpractice of any sort.

(j) **Comply with relevant laws and regulations**

Avoid any action, illegal or litigious, that may bring the profession into disrepute.

(k) **Avoid conflicts of interest**

Declare any potential conflicts of interest, personal or professional, to all relevant parties.

(l) **Respect confidentiality**

Maintain the confidentiality of your clients' affairs. Never divulge information to others unless it is necessary.

3.2 Core Competencies

Under 'Core Competencies', the Candidate is expected to demonstrate knowledge, understanding and competency in **at least THREE (3)** of the core competencies appended hereunder:

3.2.1 Measurement and Tender Documentation¹

Sub-Sections

- (a) Measurement and description of building works and/or civil engineering works and/or chemical installation works and/or petro-chemical installation works and/or pharmaceutical installation works and/or oil/gas installation works and/or mechanical and electrical services installation works.
- (b) Processing measurement into various forms of contract bills.
- (c) Editing contract bills.
- (d) Preparation of schedule of rates.
- (e) Drafting preliminaries and trade preambles.
- (f) Review of technical specifications
- (g) Measurement, admeasurements and re-measurements.

3.2.2 Tender and Procurement^{1&2}

Sub-Sections

- (a) Pre-qualification.
- (b) Advising on procurement strategy.
- (c) Advising on various forms of contract, preparation of documentation to invite tenders from contractors, specialists or sub-contractors on a competitive or negotiated basis.
- (d) Analysis and evaluation of tender returns including recommendation of award.

3.2.3 Cost Planning and Control¹

Sub-Sections

- (a) Compilation and development of cost analysis data.
- (b) Preparation of outline and detailed approximate estimates.
- (c) Cost planning including detailed budgeting and preparation of cost plans.
- (d) Ascertainment of grants and taxation allowances.
- (e) Cost-in-use studies/life-cycle costing of buildings or installations or components.
- (f) Preparation of cash flow projections.
- (g) Cost checking during design development.
- (h) Cost evaluation of alternative design or method of construction.
- (i) Preparation of periodic cost reports.

3.2.4 Post Contract Administration^{1&2}

Sub-Sections

- (a) Preparation of valuations for interim payments to contractors, specialists and sub-contractors including recommendations for payment.
- (b) Preparing and measurement of variation of price claims.
- (c) Pricing of variations and preparing final accounts.
- (d) Advising on payment regime in accordance with Building & Construction Industry Security of Payment Act ("BCISOP Act") and knowledge of relevant case law.
- (e) Preparing and/or evaluating contractual and non-contractual claims on behalf of any party.
- (f) Attendance at project meetings.

3.2.5 Tendering and Estimation²

Sub-Sections

- (a) Obtaining or building up prices for resources.
- (b) Building up prices for unit rates and preliminary items.
- (c) Ascertaining margins for overheads and profit and compiling the tender sum.
- (d) Evaluation, correction of errors and reporting on tenders received from contractors, specialists or sub-contractors.
- (e) Cost adjustment exercises including negotiations with the shortlisted tenderer.

3.2.6 Construction Management and Resource Procurement²

Sub-Sections

- (a) Planning, programming, determining requirements and availability of resources.
- (b) Advising on matters of cost, contractual implications, procurement of resources, or progress during the period of the works.
- (c) Cash flow forecasting and monitoring.
- (d) Placing orders with sub-contractors and suppliers and issuing variation instructions affecting these works.
- (e) Cost studies on site activities.
- (f) Monitoring and predicting profitability of construction works and preparing management reports.
- (g) Liaison with employer, consultants, statutory and services authorities.

Note¹

Core competencies applied for Professional Quantity Surveyor ("PQS") and Contracting Quantity Surveyor.

Note²

Core competencies applied for Contracting Quantity Surveyor.

3.3 Optional Competencies

Under 'Optional Competencies', the Candidate is expected to demonstrate knowledge, understanding and competency in **at least ONE (1)** of the optional competencies appended hereunder:

3.3.1 Feasibility Studies

Sub-Sections

- (a) Undertaking feasibility studies and analysis to advise client on appropriate economic development strategies.
- (b) Advising on factors affecting the total development value.

3.3.2 Dispute Resolution

Sub-Sections

- (a) Advising on various techniques in dispute resolution including negotiation, mediation, conciliation, adjudication, arbitration, independent expert determination and litigation.
- (b) Application of knowledge of the relevant law governing dispute resolution procedures.

3.3.3 Risk Management

Sub-Sections

- (a) Advising on the nature of risks in construction projects.
- (b) Application of appropriate methods and techniques to carry out risk assessment.
- (c) Implementation of risk management system to specific projects.

3.3.4 Value Management

Sub-Sections

- (a) Participation and contribution in value management workshops.
- (b) Organizing and facilitating value management workshop, including pre-meeting and report writing.
- (c) Application of value methodology.

3.3.5 Insolvency

Sub-Sections

- (a) Advising on precautions to be taken when insolvency of a party is imminent.
- (b) Advising on procedures, rights and liabilities of the various parties when such event actually happens.
- (c) Carrying out survey, recording and evaluating work left incomplete.
- (d) Preparation of hypothetical final account and calculation of respective final cost liability.

3.3.6 Insurance Matters

Sub-Sections

- (a) Advising on different types of insurances usually used in construction or professional services.
- (b) Preparation of documentation to procure insurances.
- (c) Vetting of insurance policies.
- (d) Surveying, recording, calculating or adjusting loss or damage for purpose of insurance claims.

3.3.7 Third Party Technical or Professional Audits

Sub-Sections

- (a) Auditing quantity surveying works done by other organizations or different departments within the same organization.
- (b) Conducting audits on quantity surveying practices on behalf of quality assurance agencies.

3.3.8 Sustainability

Sub-Sections

- (a) Evaluating life cycle costs of alternative environmentally friendly and sustainable design solutions.
- (b) Provide cost advice on alternative sustainable design solutions for optimization of design and economy.

3.3.9 Building Information Modelling ('BIM')

Sub-Sections

- (a) Understanding of BIM and usage of the relevant software for the extraction of BIM quantities.

3.3.10 Productivity

Sub-Sections

- (a) Understanding of latest productivity initiatives and technologies for the built environment industry such Design for Manufacturing Assembly ("DfMA"), Prefabricated Prefinished Volumetric Construction ("PPVC"), Integrated Digital Delivery ("IDD"), etc.

3.4 Submission Requirements

The following supporting documents must be submitted in hardcopy (3 sets) and pdf copy via electronic mail to SISV (qs.admin@sisv.org.sg).

3.4.1 Log book/Diary, Competencies Checklist and Report/Summary of Experience and Competencies Gained in respect of a minimum period of two (2) years local experience during which the competencies are gained as follows:

- (a) Competencies Checklist (for three categories of competencies stated in Section 3.1 to 3.3) and
- (b) Report/Summary of Experience and Competencies Gained (for three sub-sections of competencies in Sections 3.2.1 to 3.3.10) between 1,200 and 1,500 words.
- (c) A copy of curriculum vitae completes with detail experiences including projects information, roles and responsibilities.

The competencies documented in the afore mentioned Checklist and Report/Summary will be examined and must be accepted by SISV before the Candidate is eligible to be called for the APC Interview.

4 ASSESSMENT OF PROFESSIONAL COMPETENCE (“APC”) INTERVIEW

4.1 Purpose

- 4.1.1** The purpose of APC Interview is to enable the panel of assessors to examine the Candidate’s level of professional competence before admitting him or her as a Professional Quantity Surveyor.
- 4.1.2** During the APC Interview, the Candidate is expected to show proficiency and ability of being a Professional Quantity Surveyor.
- 4.1.3** A successful Candidate who has fulfilled the competency requirements and passed the APC interview will be admitted as a professional member of SISV (“MSISV”).

4.2 Submission of Application and Payment of Fee

- 4.2.1** Candidates who wish to undergo APC must submit their application by completing relevant forms provided by SISV. The application forms must be submitted together with the Log book/Diary, Competencies Checklist and Report/Summary of Experience and Competencies Gained (as defined in Section 3.4) as well payment of fee as prescribed by SISV.

4.3 APC Interview Format

- 4.3.1** Candidates are required to provide proof of identity before APC Interview commences.
- 4.3.2** An APC Interview is expected to be approximately 45-60 minutes, which covers the following:
 - Introduction and Welcome by the Panel Chair
 - Candidate Explanation on Education and Experience
 - Questions from Panel of Assessors on Competencies
 - Final General Questions from Panel of Assessors
 - Closing by the Panel Chair
- 4.3.3** During the APC Interview, the Candidate will be examined on the information included in Log book/Diary, Competencies Checklist and Report/Summary of Experience and Competencies Gained.

- 4.3.4** The Candidate is expected to demonstrate their competencies which support their application for membership at the APC Interview.

5 RESULT OF APC INTERVIEW

- 5.1.1** The result of APC Interview will normally be notified to the Candidate within one (1) month.
- 5.1.2** All APC Interview results are final and not subject to appeal. No correspondence with Candidate will be entered into in respect of any request for explanation of such decisions or appeals against such decisions.

6 APPENDICES

6.1 QS Professional Pathway – Appendix A

- 6.1.1** The QS professional pathway and an overview of the QS professional competencies are set out in Appendix A.

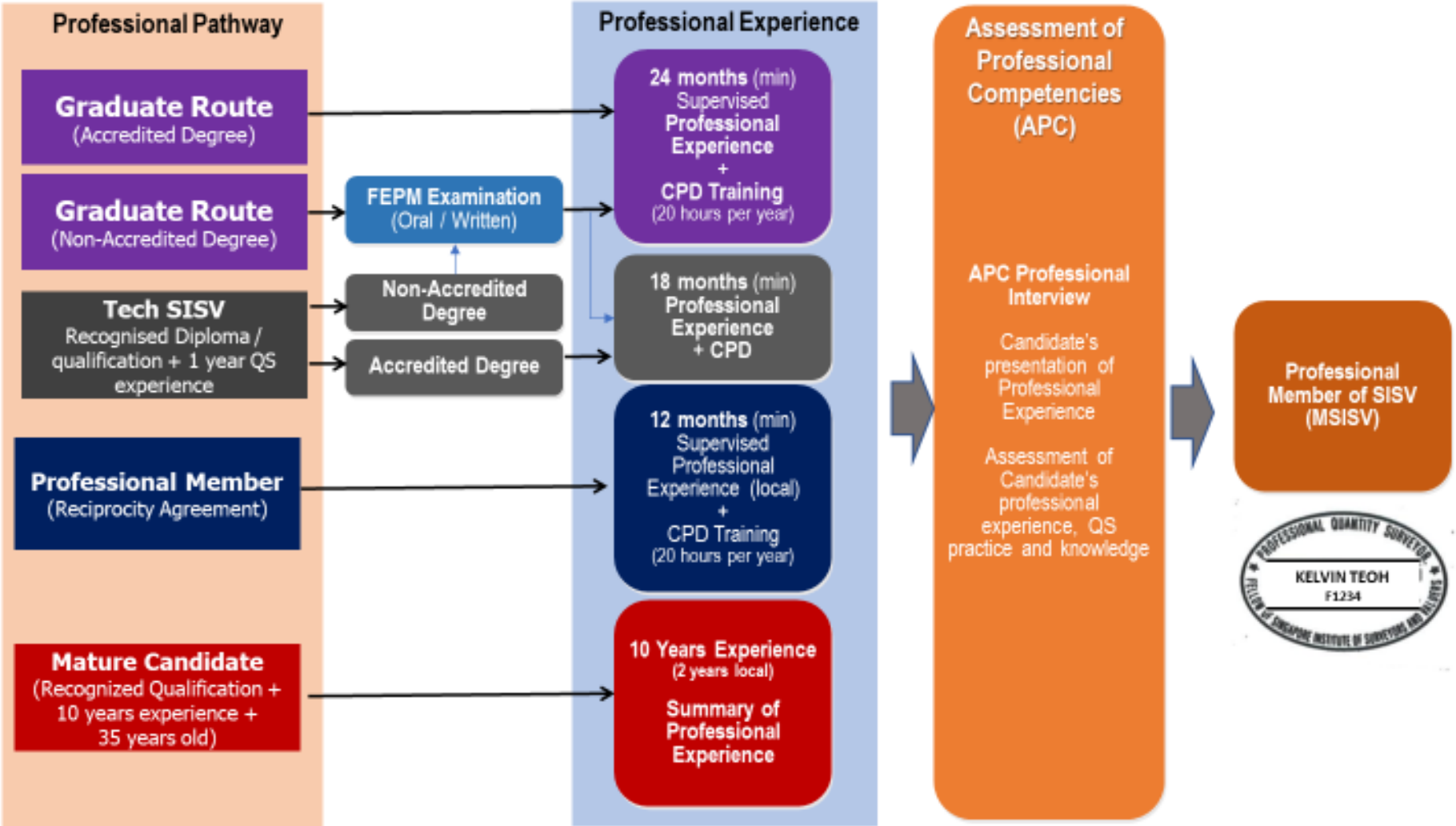
6.2 Competencies Checklist – Appendix B

- 6.2.1** The Competencies Checklist is to be submitted by the Candidate to SISV.
- 6.2.2** This Competencies Checklist shall be completed and signed by the Candidate and certified and signed by the Supervisor.
- 6.2.3** This Competencies Checklist shall show the competencies gained locally by the Candidate as listed in Sections 3.1 to 3.3.

6.3 Report/Summary of Experience and Competencies Gained – Appendix C

- 6.3.1** Appendix C is a cover page to Report/Summary of Experience and Competencies Gained which must be prepared by the Candidate.
- 6.3.2** The Report/Summary of Experience and Competencies Gained is to be submitted to SISV at the time the Candidate submits Appendix B.
- 6.3.3** This Report/Summary of between 1,200 and 1,500 words shall describe the specific Local Competencies gained by the Candidate in three of the listed Sub-Sections in Sections 3.2.1 to 3.3.10 of his choice and include a brief resume of the Overall Competencies gained.
- 6.3.4** The Local Competencies described in the Report/Summary of Experience and Competencies Gained shall be approved by SISV and must be for a period of not less than two (2) years prior to the date of submission.
- 6.3.5** This Report/Summary of Experience and Competencies Gained shall be completed and signed by the Candidate, authenticated and signed by the Supervisor and Employer.

Appendix A - QS Professional Pathway





QS Professional Competencies

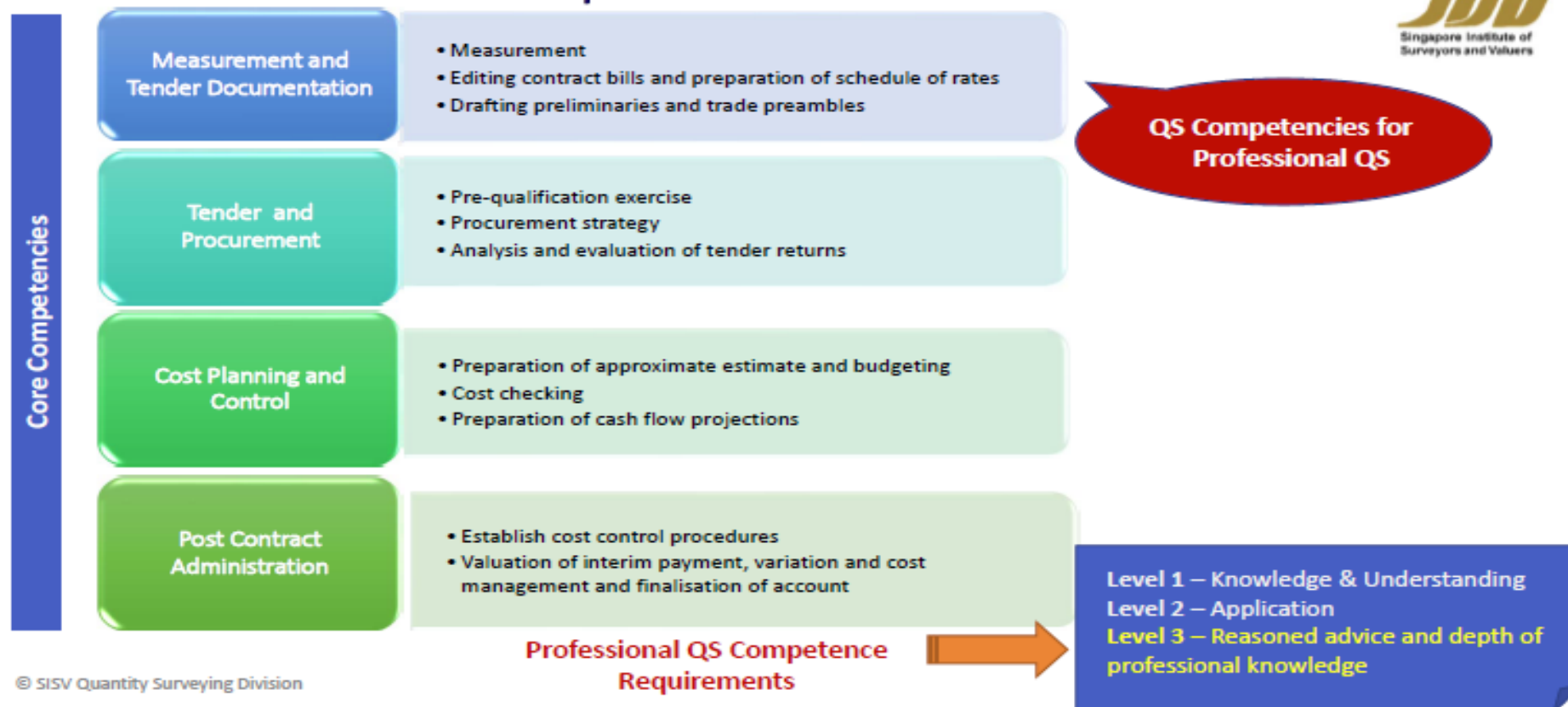
Conduct Rules, Ethics & Professional Practice



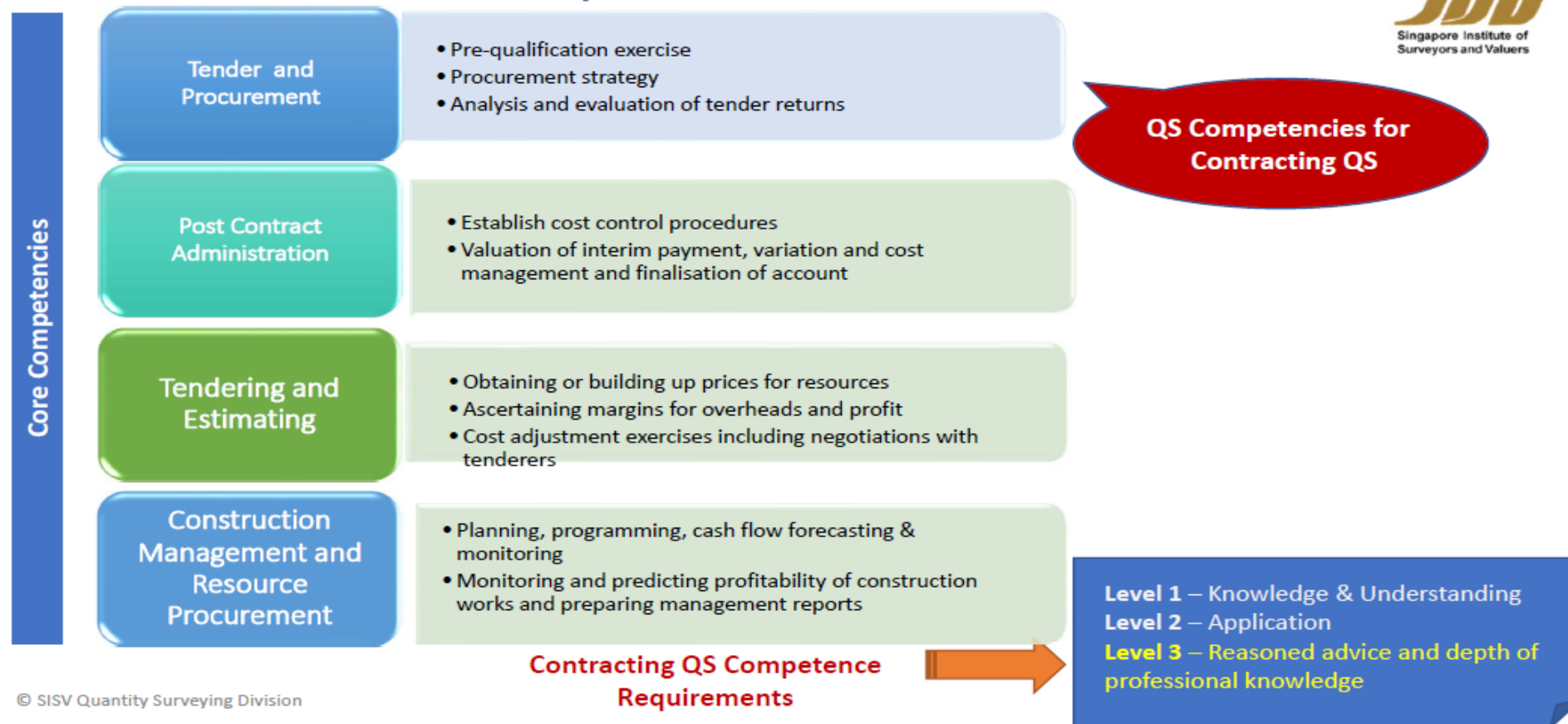
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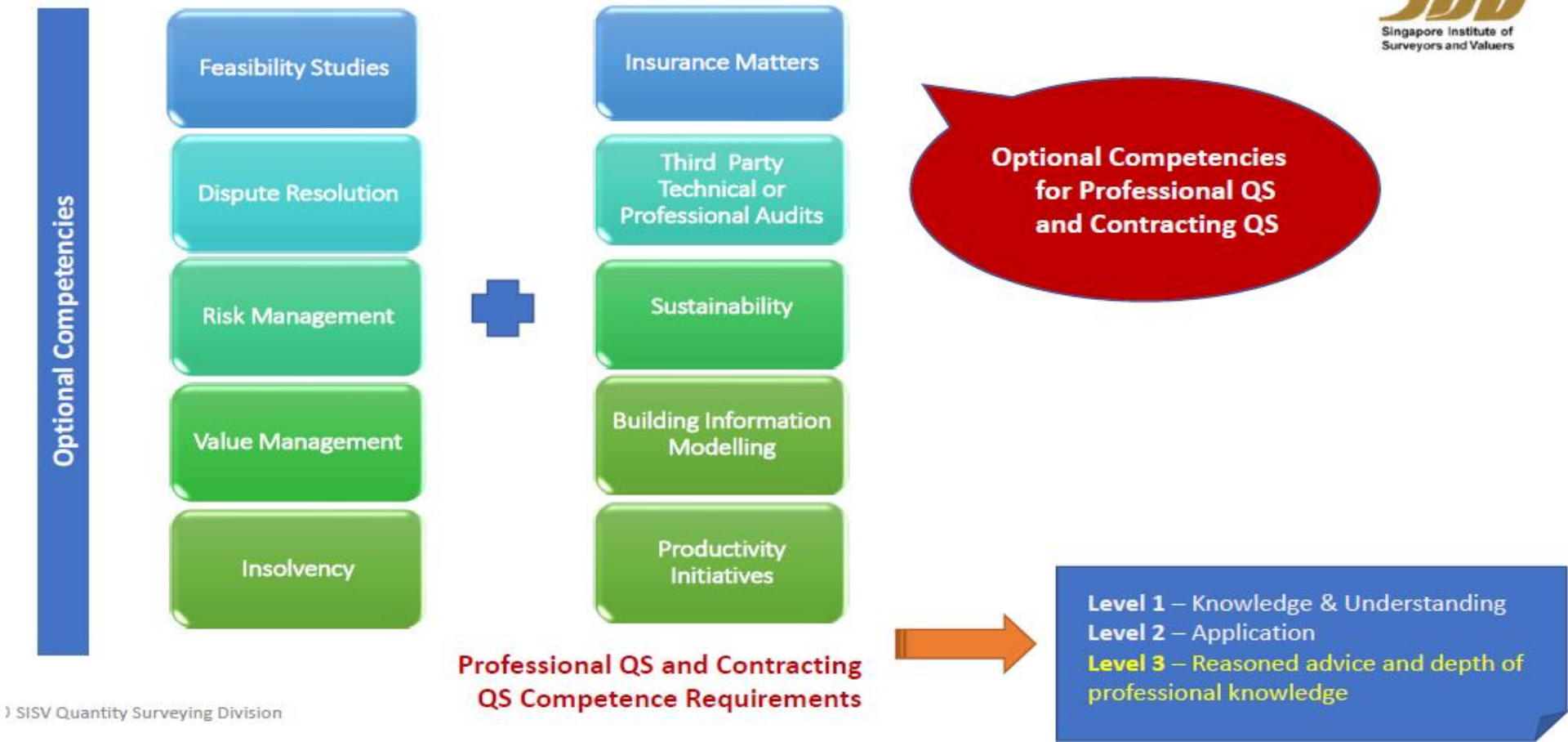
QS Professional Competencies



QS Professional Competencies



QS Professional Competencies



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Appendix B - Competencies Checklist

This checklist relates to competencies gained locally for a period of not less than two (2) years prior to the date of submission.

The sections shown are related to the competencies listed in Section 3.1 to 3.3 of the Candidate's Guide.

AREAS OF COMPETENCIES	Col 1 COMPETENCY STANDARD GAINED To be briefly described by Candidate	Col 2 Comments by Supervisor	Col 3 Insert ✓		
<u>Mandatory Competency</u> Conduct Rules, Ethics and Professional Practice			Sub-Sections identified in	3.1.1	
				3.1.2	
<u>Core Competencies</u> Measurement and Tender Documentation			Sub-Sections identified in	3.2.1	
				(a)	
				(b)	
				(c)	
				(d)	
				(e)	
				(f)	
Tender and Procurement			Sub-Sections identified in	3.2.2	
				(a)	
				(b)	
				(c)	
Cost Planning and Control			Sub-Sections identified in	3.2.3	
				(a)	
				(b)	
				(c)	
				(d)	
				(e)	

				(f)	
				(g)	
				(h)	
				(i)	
Post Contract Administration			Sub-Sections identified in	3.2.4	
				(a)	
				(b)	
				(c)	
				(d)	
				(e)	
				(f)	
Tendering and Estimation			Sub-Sections identified in	3.2.5	
				(a)	
				(b)	
				(c)	
				(d)	
				(e)	
Construction Management and Resource Procurement			Sub-Sections identified in	3.2.6	
				(a)	
				(b)	
				(c)	
				(d)	
				(e)	
				(f)	
				(g)	
<u>Optional Competencies</u>			Sub-Sections identified in	3.3.1	
Feasibility Studies				(a)	
				(b)	
Dispute Resolution			Sub-Sections identified in	3.3.2	
				(a)	
				(b)	
Risk Management			Sub-Sections identified in	3.3.3	
				(a)	
				(b)	
				(c)	
Value Management			Sub-Sections identified in	3.3.4	
				(a)	
				(b)	
				(c)	
Insolvency			Sub-Sections identified in	3.3.5	
				(a)	

				(b)	
				(c)	
				(d)	
Insurance Matters			Sub-Sections identified in	3.3.6	
				(a)	
				(b)	
				(c)	
				(d)	
Third Party Technical or Professional Audits			Sub-Sections identified in	3.3.7	
				(a)	
				(b)	
Sustainability			Sub-Sections identified in	3.3.8	
				(a)	
				(b)	
Building Information Modelling			Sub-Sections identified in	3.3.9	
				(a)	
Productivity			Sub-Sections identified in	3.3.10	
				(a)	

<u>CANDIDATE'S DECLARATION</u>	<u>SUPERVISOR'S DECLARATION</u>
Candidate's Name (in full)	Name of Employer
Membership Grade & No.	Address
I certify that the foregoing competencies were gained by me during the period from to whilst in the employment of	I certify that the Candidate has been supervised by me during the period stated and has gained the foregoing competencies
Signature	Name
Date	Signature
	Qualification
	Date

SINGAPORE INSTITUTE OF SURVEYORS AND VALUERS

**Appendix C – Report/Summary of Experience and Competencies Gained in
THREE Sub-Sections listed in Sections 3.2.1 to 3.3.10 of the Candidate's Guide**

CANDIDATE'S NAME (in full)

.....

Membership Grade & Number

.....

I certify that the attached is a report/summary of overall and detailed competencies
gained by me locally during the period from to

.....

Signature of Candidate

.....

Date

.....

Additional comment by Supervisor:-

Authentication by Supervisor

Name

.....

Signature

.....

Qualification

.....

Date

.....

Employer's Name

.....

Address

.....

.....

.....

Signature of Employer

.....

Date

.....

(See note below)

Note:

If the Candidate is employed in a large organisation or a Government Department or a Statutory Board, this form shall be endorsed by the Head of Department on behalf of the Employer.