

## CHAPTER 3 METHODOLOGY

### 3.1 Chapter Overview

This chapter outlines the methodological approach and steps required to develop an integrated GRC model for the faculty of Thai public affiliated universities. It begins by exploring the merits of the knowledge management perspective taken in this research before describing methods and tools of data collection required to capture knowledge and create an integrated GRC model based on Malcolm Baldrige National Quality Award (MBNQA). In Thailand, the Office of the Public Sector Development commission (OPDC) applied MBNQA to create a Thai-specific Public Management Quality Award (PMQA). The MBNQA is directly based on the MBNQA and encourages government sectors in Thailand to increase quality management (OPDC, 2008). This chapter describes the application of the GRC model to a case study at the College of Arts, Media and Technology (CAMT), Chiang Mai University. The chapter then explains how the faculty specific (CAMT) GRC model is generalised and adapted for the faculty of public affiliated universities. Finally, the chapter explains the focus and rationale of the GRC model evaluation. The research methodology, and this chapter, can be illustrated by the five key steps shown in Figure 3.1.



**Figure 3.1 Key conceptual steps in the research methodology**

These key conceptual steps were met by a practical knowledge management methodology, which described in sections 3.4 - 3.7.

### 3.2 Practical Methodological Steps

Figure 3.2 illustrated the methodological steps undertaken in the research and the overall methodological framework

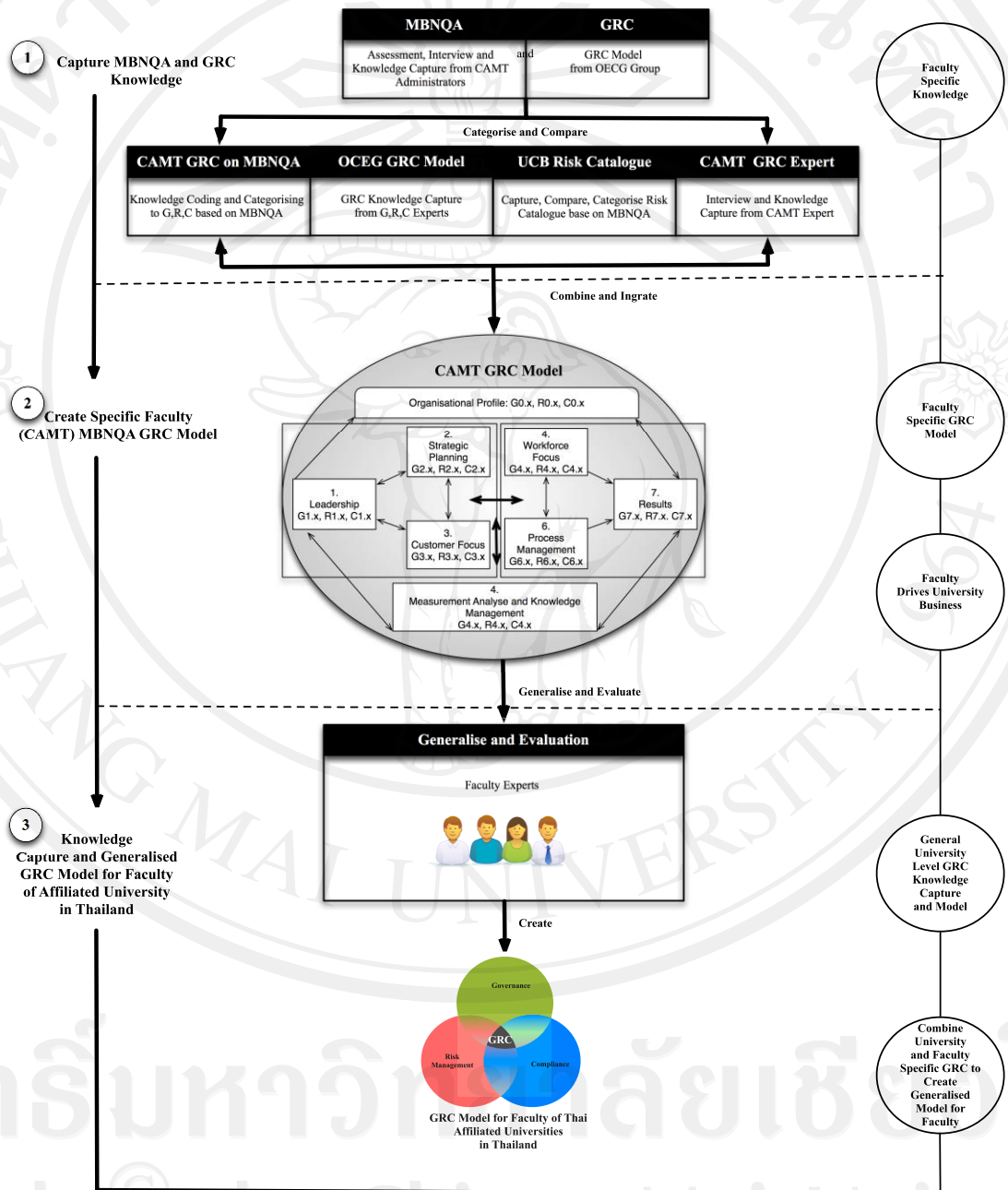


Figure 3.2 Practical Methodological Steps

This chapter now outlines how each of these steps was achieved in the research.

### 3.2.1 Capturing GRC Knowledge at CAMT by Using the MBNQA as a Framework

There are 3 steps for capturing GRC knowledge at CAMT by using the MBNQA as a framework, which shows in Figure 3.3

CAMT GRC on MBNQA	CAMT GRC Expert	UCB Risk Catalogue
Knowledge Coding and Categorising to G,R,C based on MBNQA	Interview and Knowledge Capture from CAMT Expert	Capture, Compare, Categorise Risk Catalogue base on MBNQA

**Figure 3.3 Capturing Faculty Specific GRC Knowledge Methodological Steps**

#### 3.2.1.1 Capturing the CAMT GRC on MBNQA

Table 3.1 shows methodological steps which present tool and techniques for this research. The step of the research captured GRC knowledge from CAMT using the MBNQA framework.

**Table 3.1 Methodological Steps: Tools and Techniques of Capturing the CAMT GRC on MBNQA**

Tool and Techniques	Finding
<ul style="list-style-type: none"> <li>- Literature review</li> <li>- Focus group; CAMT admins and staff (Table 3.2 the biodata)</li> <li>- Select CAMT as case study</li> <li>- Group discussion in CAMT</li> <li>- Using MBNQA framework</li> <li>- Categories CAMT MBNQA to GRC category</li> </ul>	<ul style="list-style-type: none"> <li>- Understanding the 'as-is' situation of management in CAMT</li> <li>- Understanding risks in CAMT</li> <li>- Information for creating the CAMT GRC model</li> <li>- Components of the CAMT GRC Model</li> </ul>

11 staff were interviewed in a group discussion setting and their biodata is shown in Table 3.2. The group discussion allowed key GRC data to be collected from CAMT staff before it was categorised and coded into the appropriate GRC categories.

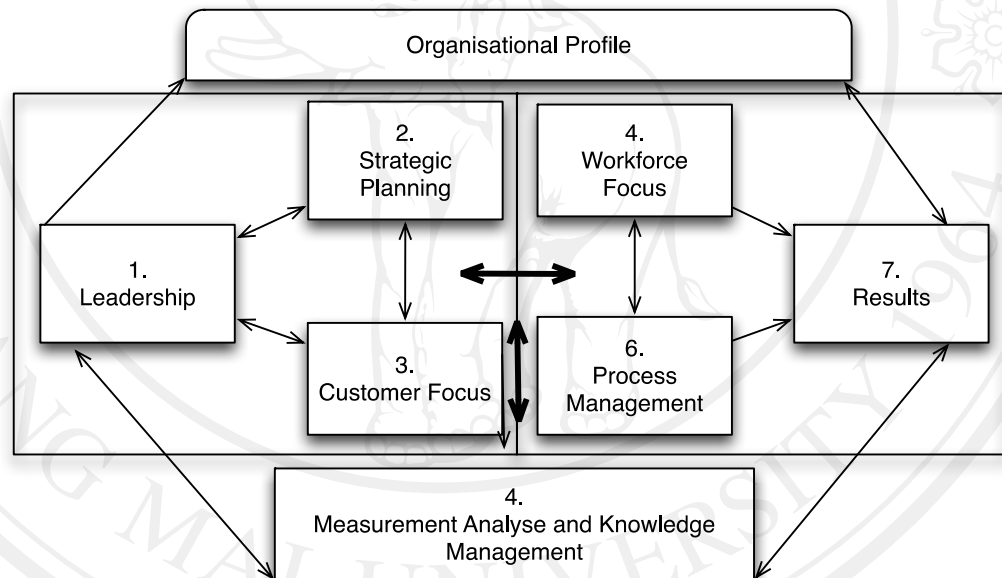
**Table 3.2 The Biodata of Staff as Sample Group at CAMT**

Sample	Position	Age	Sex	Details and Rationale
1	Dean	40-45	M	More than 15 years university management
2	Vice Dean	50-55	M	About 5 Years faculty management
3	Assistant Dean	35-40	M	About 5 Years faculty management
4	Assistant Dean	35-40	M	About 5 Years faculty management
5	Assistant Dean	35-40	M	About 5 Years faculty management
6	Head of Academic School	40-50	M	About 5 Years faculty management
7	Procurement Staff	35-45	F	10 Year working in universities and about 5 Years faculty management
8	Planning Staff	22-25	F	2 years working as planning staff
9	Financial Staff	22-25	F	2 years working as financial staff
10	QA Staff	22-25	F	2 years working as QA staff
11	QA Staff	22-25	M	2 years working as QA staff
<b>Total Sample Size 11 Individual Experts</b>				

After collecting GRC knowledge at CAMT using the MBNQA as a framework, the collected knowledge was coded and categorized into the existing MBNQA framework. This allowed the abstract GRC data to be placed in the familiar context of the MBNQA framework.

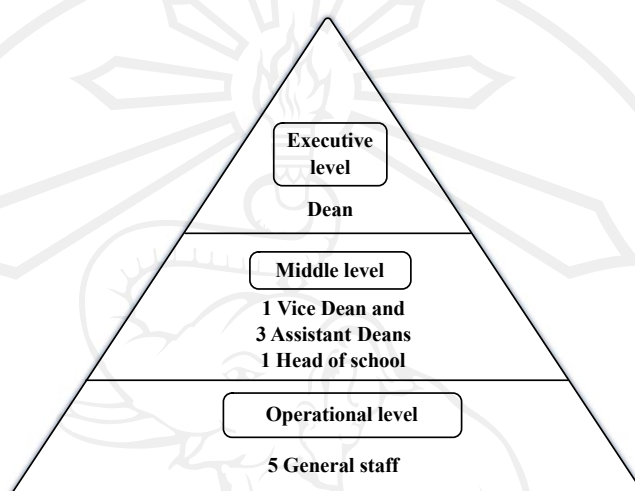
As part of CMU, the College of Arts, Media and Technology (CAMT) was established in 2003, and is one of the 21 university faculties. At the time of writing, CAMT has 874 undergraduate students, 156 postgraduate students, 115 staff (65 lecturers and 50 support staff), and is subject to the same challenges as other faculties and higher education establishments throughout Thailand. In this research, CAMT

was selected and utilised as a case study to investigate how the integrated GRC model might be applied to Thai higher education, and as part of the Thai public affiliated universities, acted as a microcosm of the wider university environment and its future challenges and objectives. The practical application of the integrated GRC model was assessed via a determination of CAMT's 'as-is' and 'to-be' management scenarios and the resulting gap analysis between these two scenarios. Ascertaining the 'as-is' and 'to-be' scenarios was completed through the use of existing management tools such as the Public Management Quality Award (MBNQA). Figure 3.4 shows the MBNQA structure and categories used to assess CAMT's current management status.



**Figure 3.4 MBNQA Framework Used to Collect Current Management Knowledge at CAMT**

To undertake the MBNQA assessment at CAMT, a variety of key staff were interviewed to understand the ‘as-is’ and ‘to-be’ management status. The type and number of staff who were interviewed are shown in Figure 3.5, while the questions in the MBNQA framework are illustrated in Table 3.3.



**Figure 3.5 CAMT Staff Interviewed to Determine Management Scenarios in Relation to GRC**

**Table 3.3 Thai Performance Excellence Framework Categories, Number of Questions and Context**

Category	Number of Questions Total 105	Context of Questions (MBNQA, 2011)
Organisational Profile	15	An overview of the organisation, how they operate, and the key challenges the organisation faces.
Category 1: Leadership	12	To examine how an organisation’s senior leaders’ personal actions guide and sustain the organisation. Also an examination of an organisation’s governance system and how the organisation meets its legal, ethical, and societal responsibilities and supports its key communities.
Category 2: Strategic Planning	9	To assess how the organisation develops strategy and action plans, how chosen strategic objectives and action plans are deployed and changed if circumstances require, and how progress is measured.

**Table 3.3 Thai Performance Excellence Framework Categories, Number of Questions and Context (Continued)**

<b>Category</b>	<b>Number of Questions Total 105</b>	<b>Context of Questions (MBNQA, 2011)</b>
Category 3: Customer Focus	11	To survey how an organisation engages its students and stakeholders for long-term market success. This engagement strategy includes how an organisation builds a student and stakeholder focused culture. Also examined is how an organisation listens to its customers (students and stakeholders) and uses this information to improve and identify opportunities for innovation.
Category 4: Measurement, Analysis, and Knowledge Management	10	To observe how an organisation selects, gathers, analyses, manages, and improves its data, information, and knowledge assets and how it manages its information technology. The category also examines how an organisation reviews and uses reviews to improve its performance.
Category 5: Workforce Focus	21	To survey how the organisation engages, manages, and develops its workforce to utilize its full potential in alignment with the organisation's overall mission, strategy, and action plans. This category examines the ability to assess workforce capability and capacity needs and to build a workforce environment conducive to high performance.
Category 6: Process Management	12	To test how an organisation designs its work systems and how it designs, manages, and improves its key processes for implementing those work systems to deliver student and stakeholder value and achieve organisational success and sustainability. In addition, to examine its readiness for emergencies.
Category 7: Results	15	To study the organisation's performance and improvement in all key areas—student learning outcomes; customer-focused outcomes; budgetary, financial, and market outcomes; workforce-focused outcomes; process effectiveness performance levels are examined relative to those of competitors and other organisations with similar programs and services.

### 3.2.1.2 Capturing Leadership Expert on GRC Knowledge at CAMT Using the MBNQA as a Framework

The second step of the GRC knowledge capture process involved in-depth interview with a GRC expert at CAMT. The expert validated and corroborated information gathered during the initial interview at CAMT and also provided new insight. Following the capture of this faculty specific GRC knowledge, the next step in the methodology brought this knowledge together to create a faculty specific GRC model.

Table 3.4 show methodology of this step including tools and techniques. The biodata of CAMT expert is presented in Table 3.5.

**Table 3.4 Methodological Steps: Tools and Techniques of Capturing Leadership expert**

Tool and Techniques	Finding
Capturing leadership expert on GRC knowledge at CAMT by using the MBNQA Framework	Components of the CAMT GRC Model

**Table 3.5 The Biodata of the Leadership Expert at CAMT**

Sample	Position	Age	Sex	Details and Rationale
1	Former Dean	40-45	M	An individual who established CAMT in CMU and is the first CAMT Dean. More than 15 years university management

### 3.2.1.3 Benchmarking GRC knowledge came from the literature in the form of the University of California, Berkeley (UCB) risk catalogue

This stage in benchmarking GRC knowledge came from the literature in the form of the University of California, Berkeley (UCB) risk catalogue. This source provided knowledge of general risks facing higher education worldwide and acted as a benchmark of higher education risks. The full UCB risk catalogue is shown in Appendix F.



### 3.2.1.4 Coding the CAMT GRC Knowledge at CAMT by Using the MBNQA as a Framework

Practical definition the purposes of the thesis and model is as follows

- Information refers to facts, data, text
- Knowledge is perspectives, beliefs, concepts and know-how

**Table 3.6 Distinguishing between of Information and Knowledge**

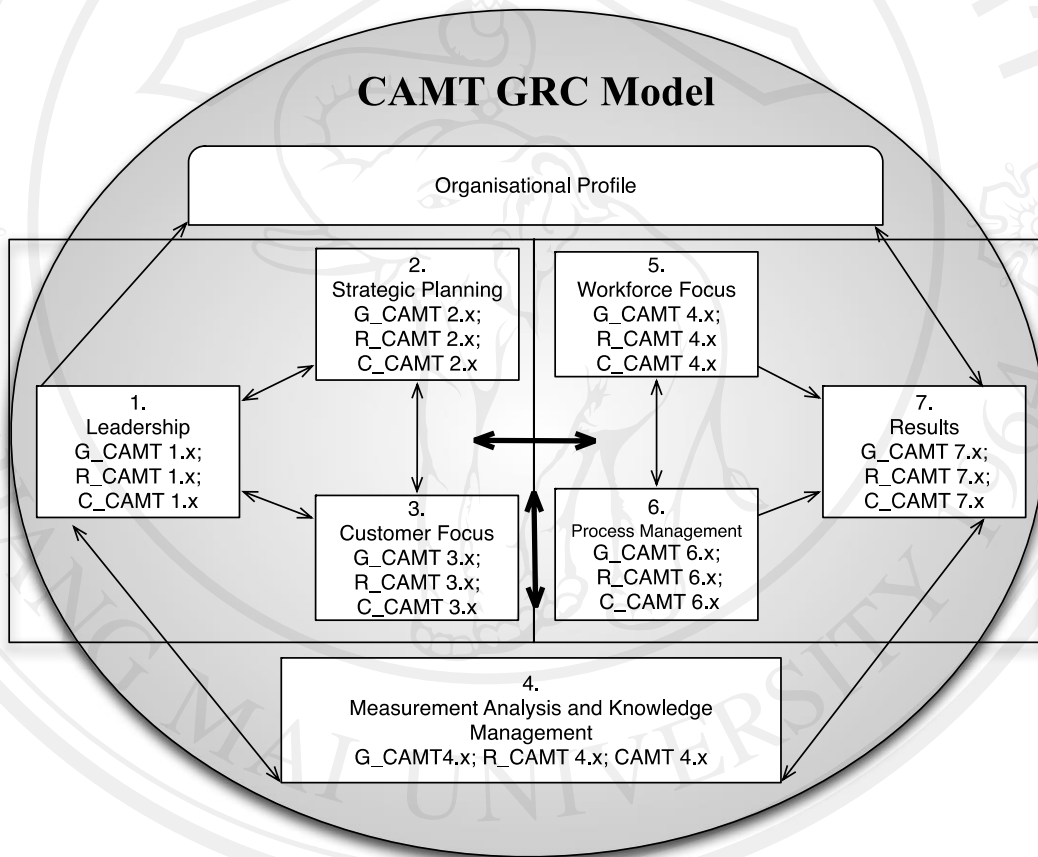
Source: Adapted from Stenmark, 2002

Information	Knowledge	Sources
Facts organised to describe a situation or condition	Truths and beliefs, perspectives and concepts, judgments and expectations, methodologies and know how	Wiig, 1997
A flow of meaningful messages	Commitments and beliefs created from these messages	Nonaka and Takeuchi, 1995
Data with meaningful messages	The ability to assign meaning	Spek and Spijkervet, 1997
Data with relevance and purpose	Valuable information from the human mind	Davenport, 1997
Text that answers the questions who, when, what, or where	Text that answers the questions why and how	Quigley and Debons, 1999
Data vested with meaning	Justified, true beliefs	Choo et al., 2000

### 3.3 Creating the Faculty Specific Model: CAMT GRC

After capturing the relevant GRC knowledge, the next step of the methodology created a faculty specific GRC model for CAMT. To produce this model, this step of the methodology focused on combining the GRC knowledge captured in the previous methodological step. The first part of this methodological section therefore coded the gathered information into either knowledge or information. This enabled the easily available knowledge to be separated from the

tacit specific information required for a GRC model. Finally, each part of the knowledge was coded to one of the sections of MBNQA in order to create the CAMT GRC MBNQA model. The next part of the methodology then sought to show how the faculty specific knowledge could be generalised to create a model for the faculty of Thai public affiliated universities. The framework of CAMT GRC on MBNQA is presented in Figure 3.6.



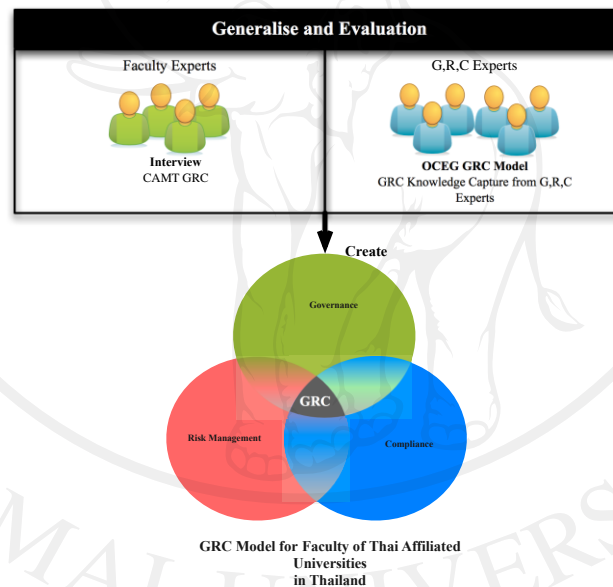
**Figure 3.6 Creating the CAMT GRC Model**

Table 3.7 expressed methodology of creating the CAMT GRC Model including tools, techniques and finding results, which is the CAMT GRC Model

**Table 3.7 Methodological Steps: Tools and Techniques; Creating the CAMT GRC Model**

Tool and Techniques	Finding
<ul style="list-style-type: none"> <li>- Categories CAMT MBNQA to GRC category</li> <li>- Capturing leadership expert on GRC knowledge at CAMT by using the MBNQA Framework</li> </ul>	The CAMT GRC Model

### 3.4 Evaluation and Generalisation the Faculty GRC Model



**Figure 3.7 Evaluation and Generalisation of the Faculty GRC Model**

After gathering knowledge and creating the GRC model for CAMT, the next steps are evaluated and generalised this knowledge in order to produce a GRC model suitable for the faculty of the Thai public affiliated universities. There are two step, namely evaluation by faculty experts and generalisation by G,R,C experts.

Table 3.7 shows tool and techniques for evaluation and generalisation of the faculty GRC model

**Table 3.8 Methodological Steps: Tools and Techniques; Evaluation and Generalisation the faculty GRC Model**

<b>Tool and Techniques</b>	<b>Finding</b>
<ul style="list-style-type: none"> <li>- Interview a case study about increasing student tuition fee by using the CAMT GRC Model</li> <li>- Interview governance, risk management and compliance experts by using OCEG GRC framework</li> </ul>	<ul style="list-style-type: none"> <li>- Evaluation of the CAMT GRC</li> <li>- The generalized faculty GRC Model</li> </ul>

### 3.4.1 Evaluation the CAMT GRC Model

The first step in evaluation involved interviews with different experts to assess, which knowledge was important. Table 3.8 indicates the four experts and their associated biodata.

**Table 3.9 Experts Selected to Evaluated the Associated Rationale**

<b>Sample</b>	<b>Position</b>	<b>Age</b>	<b>Sex</b>	<b>Details and Rationale</b>
<b>1</b>	Risk manager and assistance professor in faculty of Chiang Mai University	40-45	M	<ul style="list-style-type: none"> <li>- Experience in university administration</li> <li>- Expert in industry engineering</li> <li>- Consultant to both public and private sectors in risk management</li> </ul>
<b>2</b>	Former vice dean and risk management committee in faculty of Chiang Mai University	40-45	F	<ul style="list-style-type: none"> <li>- Experience in university administration</li> <li>- Committee of risk management in faculty</li> <li>- Expert in accounting and auditing</li> </ul>

**Table 3.9 Experts Selected to Evaluate the Associated Rationale (Continued)**

Sample	Position	Age	Sex	Details and Rationale
3	Head of academic school in faculty of Chiang Mai University	35-40	M	- About 5 years faculty management
4	Assistant dean	40-45	M	- About 8 years experience in university administration
5	Academic assistance dean in faculty of Chiang Mai University	35-40	M	- About 2 years experience in university administration
<b>Total 5 Individual Experts</b>				

After interviews with these four experts, a faculty GRC model was created. This was then validated using the same four experts to assess whether the model met their needs.

### 3.4.2 Knowledge Capture and Generalisation for Faculty Specific GRC Model

The next step involved in-depth interviews with GRC experts to gather GRC information about Thai higher education. The GRC knowledge collected from these experts related to GRC for Thai higher education and more specifically, the public affiliated universities. The biodata for this sample group is shown in Table 3.9. Six experts were interviewed, one relating to governance, two with risk as their expertise and three with compliance as their expertise.

**Table 3.10 The Biodata of GRC Experts**

Sample	Position	Age	Sex	Details and Rationale
<i>Governance Expert</i>				
1	President of university council	60-65	M	An individual who is a committee board member of a number of public affiliated university councils and is president of the board of committee in a traditional Thai public university. This allows knowledge of governance to be gathered and a comparison between traditional public and the new public affiliated universities. The expert has published many papers about management and governance in Thai higher education and Thai public affiliated universities, and was a Secretary General of the Higher Education Commission
<i>Risk Management Experts</i>				
2	Dean	55-60	M	Member of the CMU risk committee and university administrator with experience of providing risk advice to industries in Thailand. The expert is also a member for international cooperation. This risk expert was able to provide a higher education perspective with a particular focus on the forthcoming risks from internationalisation
3	Thai Risk Consultant	60-70	M	The expert is a specialist in IT governance, IT audit, and enterprise risk management areas. As well as a freelance consultant on risk the expert is a committee member of various leading risk organizations; for example, the audit committee. The expert is a former vice chairman of the Institute of Internal Audits, Thailand and currently serving as an audit chair at ISACA

**Table 3.10 The Biodata of GRC Experts (Continued)**

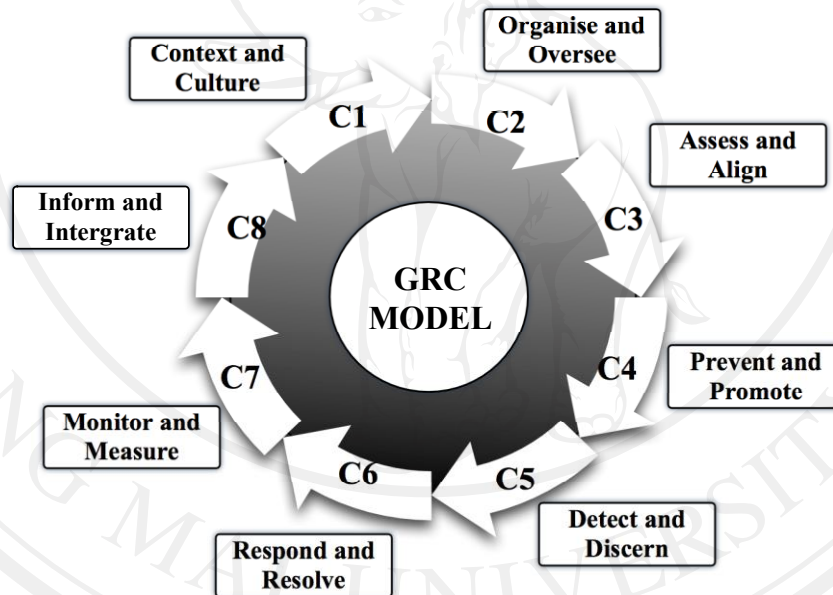
Sample	Position	Age	Sex	Details and Rationale
				Bangkok, Thailand and a vice chairman at TISA-Thailand information security association. The rationale for selecting this expert relates to considerable public and private sector risk experience from a Thai perspective
<i>Compliance Experts</i>				
<b>4</b>	Dean	55-60	M	Compliance experts who teach law and are administrators in Thai higher education more than 30 years to teach law in university and about 10 years university management.
<b>5</b>	Vice Dean	45-50	M	Compliance experts who teach law and are administrators in Thai higher education more than more than 10 years to teach law in university and about 10 years university management.
<b>6</b>	University Law Director	60-65	M	The experts provided a law (compliance) background with a Thai higher education perspective. Director of Law who has experience in setting new university laws and regulations. The expert has worked at university in the domain of law for more than 40 years.
<b>Total 6 Individual Experts</b>				

After the detailed literature review and document analysis, detailed and specific knowledge was captured from experts in order to gather the knowledge requirements of a GRC model for the Thai public affiliated universities. Knowledge capture involved two key steps. Firstly, experts were interviewed to capture their knowledge and secondly, structural knowledge mapping was utilised to structure the knowledge and identify key knowledge relationships.

Governance knowledge for the Thai public affiliated universities was captured through semi-structured interviews with an expert and related analysis of appropriate

documentation. In terms of capturing expert knowledge, the OCEG GRC framework acted as a guide when constructing questions and the expert was asked about governance according to the eight main aspects of the OCEG GRC framework. The interview was split into these eight sections, as described below:

The full questionnaire and expert responses are presented in Appendix B, while the key results from the questionnaire are summarised below according to each of the eight OCEG categories. A detailed summary of knowledge for each of the eight OCEG categories a structural knowledge map was created for the governance category in Thai public affiliated universities.



*Adapted from OCEG (2009)*

**Figure 3.8 Eight Key Parts of an Effective GRC Capability**

Table 3.10 shows an example question from each of the eight categories, which were asked to capture faculty specific GRC knowledge



**Table 3.11 Interview Questions, Based Upon the Framework of Governance, Risk Management and Compliance Presented in the Open Compliance & Ethics Group (OCEG)'s GRC Capability Model**

<b>Section</b>	<b>Number of Questions</b>	<b>Context of Questions (Questions in this Interview are Based Upon the Framework of Governance Presented in the Open Compliance &amp; Ethics Group (OCEG)'s GRC Capability Model (OCEG, 2009))</b>
<b>Governance</b>		
1: Context and Culture	7	Questions in this section relate to the external and internal context of governance in Thai universities as well as the culture, values and objectives of effective governance.
2: Organise and Oversee	8	The questions in this section relate to the overall governance approach and the related roles and responsibilities.
3: Assess and Align	7	The questions in this section are about how governance aligns with risk and a wider GRC framework.
4: Prevent and Promote	4	This section includes questions regarding the promotion of governance throughout Thai universities and the prevention of issues related to governance.
5: Detect and Discern	3	This part relates to notifications surveys and inquires that relate to governance in the organisation.
6: Respond and Resolve	3	This section relates to internal measures to control governance, as well as responses to third-party inquiries or investigations.
7: Monitor and Measure	4	Questions in this section pertain to monitoring and evaluating performance related to governance.

**Table 3.11 Interview Questions, Based Upon the Framework of Governance, Risk Management and Compliance Presented in the Open Compliance & Ethics Group (OCEG)'s GRC Capability Model (Continued)**

<b>Section</b>	<b>Number of Questions</b>	<b>Context of Questions (Questions in this Interview are Based Upon the Framework of Governance Presented in the Open Compliance &amp; Ethics Group (OCEG)'s GRC Capability Model (OCEG, 2009))</b>
8: Inform and Integrate	7	This section is about information management, technology and infrastructure.
<b>Risk Management</b>		
1: Context and Culture	6	Questions in this section relate to the external and internal context of risk management in Thai universities as well as the culture, values and objectives of effective risk management.
2: Organise and Oversee	7	The questions in this section relate to the overall risk management approach and the related roles and responsibilities.
3: Assess and Align	5	The questions in this section are about how compliance aligns with risk and a wider GRC framework.
4: Prevent and Promote	3	This section includes questions regarding the promotion of risk management throughout Thai universities and the prevention of issues related to risk management.
5: Detect and Discern	3	This part relates to notifications surveys and inquiries that relate to risk management in the organisation.
6: Respond and Resolve	3	This section relates to internal measures to control risk management, as well as responses to third-party inquiries or investigations.
7: Monitor and Measure	2	Questions in this section pertain to monitoring and evaluating performance related to risk management.

**Table 3.11 Interview Questions, Based Upon the Framework of Governance, Risk Management and Compliance Presented in the Open Compliance & Ethics Group (OCEG)'s GRC Capability Model (Continued)**

<b>Section</b>	<b>Number of Questions</b>	<b>Context of Questions (Questions in this Interview are Based Upon the Framework of Governance Presented in the Open Compliance &amp; Ethics Group (OCEG)'s GRC Capability Model (OCEG, 2009))</b>
8: Inform and Integrate	6	This section is about information management, technology and infrastructure.
<b>Compliance</b>		
1: Context and Culture	6	Questions in this section relate to the external and internal context of compliance in Thai universities as well as the culture, values and objectives of effective compliance.
2: Organise and Oversee	7	The questions in this section relate to the overall compliance approach and the related roles and responsibilities.
3: Assess and Align	6	The questions in this section are about how compliance aligns with risk and a wider GRC framework.
4: Prevent and Promote	3	This section includes questions regarding the promotion of compliance throughout Thai universities and the prevention of issues related to compliance.
5: Detect and Discern	3	This part relates to notifications surveys and inquiries that relate to compliance in the organisation.
6: Respond and Resolve	3	This section relates to internal measures to control compliance, as well as responses to third-party inquiries or investigations.

**Table 3.11 Interview Questions, Based Upon the Framework of Governance, Risk Management and Compliance Presented in the Open Compliance & Ethics Group (OCEG)'s GRC Capability Model (Continued)**

<b>Section</b>	<b>Number of Questions</b>	<b>Context of Questions (Questions in this Interview are Based Upon the Framework of Governance Presented in the Open Compliance &amp; Ethics Group (OCEG)'s GRC Capability Model (OCEG, 2009))</b>
7: Monitor and Measure	2	Questions in this section pertain to monitoring and evaluating performance related to compliance.
8: Inform and Integrate	6	This section is about information management, technology and infrastructure.
<b>Total 43 questions</b>		

### **3.5 Chapter Summary**

This chapter has outlined the methodological overview behind the research in this thesis. It has described the importance of the knowledge management perspective as well as defining the tools and techniques used in each part of the research. The tools, techniques and perspectives described in this chapter act as a theoretical underpinning for the results presented in the next chapters.

Table 3.11 shown the key methodological steps undertaken to complete this research, including their order and approximate timetables.



