

Development of a Guidance Model for the Selection of Organisational Improvement Initiatives

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Musli Bin Mohammad

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Abstract

This research aims to develop a guidance model for selecting organisational improvement initiatives. The final guidance model was developed using the acronym 'GUIDE' which represents the five key steps to select improvement initiatives: (1) Goal setting, (2) Understanding relevant improvement initiatives, (3) Identifying decision criteria, (4) Deciding on the appropriate initiative, and (5) Evaluating the decision. This research used mixed methods approach, whereby qualitative data was used more dominantly than quantitative data. Two research phases were involved: (1) Development, evaluation and refinement of a conceptual model; and (2) Development, evaluation and refinement of a guidance model. This research incorporated multiphase concurrent and sequential data collection, which comprises an extensive literature review, a document review, a global exploratory survey, an evaluation survey and seventeen semi-structured interviews conducted in New Zealand, Singapore and Malaysia. Semi-structured interviews and an evaluation survey were used as primary sources of data. The proposed multilayer guidance model is one of the first to focus on the holistic processes to be used in selecting improvement initiatives whereby its contents are explicitly aligned to the Business Excellence Models (BEMs), such as Baldrige Criteria for Performance Excellence and European Foundation for Quality Management (EFQM) Excellence Model. Systems and contingency approaches were incorporated in the development of this model so that multiple perspectives and contexts (e.g. current maturity level of an organisation, benefit of implementing the initiative, ability to gain top management commitment and support) are considered when selecting an initiative. Part of the guidance model also consists of a framework that shows the main improvement initiatives that can be adopted towards business excellence (BE), which can help organisations to choose appropriate improvement initiatives by narrowing down the options according to the areas of implementation and BE maturity. This framework also indicates that the BEM can be used as an overarching framework for selecting and managing multiple improvement initiatives. In addition, this research identified that there were 94 national Quality / BE Awards used in 83 countries in year 2010 and revealed one of the latest and comprehensive list of the Quality / BE Awards worldwide.

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Abbreviations

AHP	Analytic Hierarchy Process
AIRMIC	Association of Insurance and Risk Managers
ALARM	National Forum for Risk Management in the Public Sector
APO	Asian Productivity Organisation
BE	Business Excellence
BEM	Business Excellence Model
BCM	Business Continuity Management
BI	Business Improvement
BPIR	Business Performance Improvement Resource
BPR	Business Process Reengineering
CEHE	Consortium for Excellence in Higher Education
CEO	Chief Executive Officer
COER	Centre for Organisational Excellence Research
CPE	Criteria for Performance Excellence
EFQM	European Foundation for Quality Management
ERM	Enterprise Risk Management
FMEA	Failure Mode and Effect Analysis
GUIDE	Goal-Understand-Identify-Decide-Evaluate
IRM	Institute of Risk Management
ISO	International Organisation for Standardisation
KM	Knowledge Management
MADM	Multiple Attribute Decision Making
MCDM	Multiple Criteria Decision Making
NIST	National Institute of Standards and Technology
NZAS	New Zealand Aluminium Smelters
NZBEF	New Zealand Business Excellence Foundation
NZMED	New Zealand Ministry of Economic Development
NZOQ	New Zealand Organisation for Quality
PESTLE	Political-Economic-Social-Technological-Legal-Environmental
PDCA	Plan-Do-Check-Act
QC	Quality Control

QFD	Quality Function Deployment
ROI	Return of Investment
SAW	Simple Additive Weighting
SME	Small and Medium Sized Enterprises
SPC	Statistical Process Control
SPRING	Standards, Productivity and Innovation Board Singapore
SQA	Singapore Quality Award
SWOT	Strengths-Weaknesses-Opportunities-Threats
TOPSIS	Technique for Order Preference by Similarity to Ideal Solution
TPM	Total Productive Maintenance
TQM	Total Quality Management
WSM	Weighted Sum Model

Chapter 1: Introduction to the research

1.1 Introduction to the chapter

This chapter explains the research background, aim and objectives, scope, and importance. It concludes with a description of the outline of the thesis.

1.2 Background to the research

To remain relevant, competitive and sustainable in today's increasingly complex, uncertain and dynamic environment, organisations are required to improve their performance in order to meet the purpose of their existence, and to satisfy and exceed the expectations of customers, employees, shareholders, supply chain partners, community and other stakeholders (Foley, 2010; Harrington & Harrington, 1995; Porter, 1998; Slack, Chambers, Johnston, & Betts, 2009). Organisations are facing problems in selecting appropriate improvement initiatives due to a plethora of initiatives currently available in the market (English, 1998; Hendra, 2010; Thawesaengskulthai, 2010). 'Improvement initiatives' refers herein to approaches, systems, tools and/or techniques and include, for example: Six Sigma, Lean, Business Process Reengineering, ISO9001, and benchmarking (Van der Wiele, Van Iwaarden, Dale, & Williams, 2007). Even more challenging is that the number of improvement initiatives increases every year, which makes it even harder to select the most appropriate initiative (Baxter & MacLeod, 2008; Davenport, Prusak, & Wilson, 2003; Thawesaengskulthai, 2010).

A number of organisations view initiatives such as these as a potential panacea for all organisational problems (Ricondo & Viles, 2005). In reality, while none of the individual initiatives can solve all problems effectively in the organisation, each initiative has a role to play towards improving organisational performance. Every initiative has its own strengths and limitations (Francis, 2010). Some initiatives are more effective under certain conditions and contexts (Ricondo & Viles, 2005). In process improvement, for instance, Six Sigma is more effective for reducing variation, Lean for eliminating non value-adding processes or activities, and Theory

of Constraints for identifying and 'elevating', or dealing with process constraints (Nave, 2002).

In the quality and organisational improvement community, there can be considered to be certain factions, which comprise those who are primarily oriented towards ISO9000, Six Sigma, Lean and others. Each of these groups competes among one another and tends to solve the problem through the lens of a particular initiative, without seeing the complementary nature of the different initiatives (Cobb, 2003). It is argued, however, that application of such initiatives in isolation without proper planning and strategy will only provide short-term benefits (Dale, 2007; Dale & McQuater, 1998; Ricondo & Viles, 2005).

Improvement initiatives swing in and out of fashion similar to clothing style, car design and music trends (Clark, 2004). According to Cobb (2003, p. 10), "Every time a new management technique comes into vogue, whatever came before it is tossed out and forgotten and the new approach becomes a 'paradigm' for redefining how the business is managed." An effect of this phenomenon is that organisations become the market for the latest management fashion, and managers tend to search for new initiatives (Cobb, 2003; Seddon, 2003). In response to this issue, Cobb (2003) asserts that the search for new initiatives is not the absolute answer. It is more crucial that people should have deeper understanding of how the organisation operates or should operate as a system, and carefully select the right initiative for the right situation (Basu & Wright, 2005; Cobb, 2003; Francis, 2010). Slack et al. (2009) pointed out that:

The problem lies not with new improvement ideas, but rather with some managers becoming a victim of the process, where some new idea will entirely displace whatever went before. Most new ideas have something to say, but jumping from one fad to another will not only generate a backlash against any new idea, but also destroy the ability to accumulate the experience that comes from experimenting with each one. (p.451)

In other cases, many organisations have failed to reap the benefit of implementing the improvement initiatives. One of the reasons why this happens is due to lack of clear understanding by people regarding when, where and how to implement the initiatives (Kwok & Tummala, 1998). Many people have also not considered the contextual factors when selecting and implementing improvement initiatives at their

organisation. The right initiatives to be used may vary depending on several contextual factors, such as: the current maturity level of an organisation, areas in which the initiatives are adopted, type or size of an organisation and the capabilities of its workforce (Benson, Saraph, & Schroeder, 1991; Dahlgaard & Dahlgaard-Park, 2004; National Institute of Standards and Technology [NIST], 2010).

Most of the previous studies only focused on one specific initiative, such as, benchmarking (Adebanjo & Mann, 2008a; Mann & Grigg, 2004; McAdam & Kelly, 2002), ISO9000 (Bendell, 2000; Casadesus & Karapetrovic, 2005; Van der Wiele, Williams, & Dale, 2000), and Six Sigma (Antony, 2007; Antony & Banuelas, 2002; Basu, 2004a). Each of these studies tends to promote the particular initiative and goes into detail about the purpose, strengths, limitations and/or implementation process of the initiative. On the other hand, there are also several surveys undertaken to identify the trends, usage and/or effectiveness of improvement initiatives, which includes Cullen, O'Connor, and Mangan (2004), Mann (2008a), Rigby and Bilodeau (2007) and Weiler (2004). Unfortunately, only a few studies have been found (such as, Bendell, 2005; Radziwill, et al., 2008; Thawesaengskulthai, 2007) to address how to manage multiple improvement initiatives and provide guidance on how to select appropriate initiatives. As a result, there are limited number of models and/or guidelines currently available to assist organisations in selecting and managing multiple improvement initiatives. Most of the existing models do not explicitly stress the importance of understanding organisational profiles and improvement initiatives before selecting an appropriate initiative. In addition, none of the existing guidance models have explicitly aligned the selection processes with the Business Excellence Models (BEMs) although there is a demand for this alignment from the users and administrators of BEMs.

It is also evident from literature research (such as, Francis, 2010; Radziwill, et al., 2008; Thawesaengskulthai, 2010; Thawesaengskulthai & Tannock, 2008a) and from discussions with quality experts and practitioners that many organisations need guidance on what initiatives to use, in what order to implement the initiatives and how to select suitable initiatives. To address this problem, this research was conducted to develop meaningful guidelines for selecting appropriate improvement initiatives according to the context.

1.3 Aim and objectives of the research

This research aims to develop a guidance model for selecting appropriate organisational improvement initiatives. In order to achieve the research aim, the following objectives were set:

- (i) To identify the main organisational improvement initiatives that should be used according to the areas of implementation and organisational maturity;
- (ii) To identify the guidance models currently available to assist in the selection of organisational improvement initiatives;
- (iii) To investigate the main steps involved in selecting organisational improvement initiatives;
- (iv) To identify the critical contingency factors that should be considered in selecting organisational improvement initiatives; and
- (v) To develop, evaluate and refine an original guidance model for selecting appropriate organisational improvement initiatives.

1.4 Scope of the research

The scope of the research is described as follows:

- (i) This research focuses on the decision making process in selecting appropriate organisational improvement initiative, which is depicted in Figure 1.1. It does not cover the adoption and maintenance of initiatives.
- (ii) This research is intended for practitioners, managers, consultants, researchers, and/or academics in the area of quality and business excellence (BE).
- (iii) This research focuses on the usage of rational and structured approach in selecting improvement initiatives.

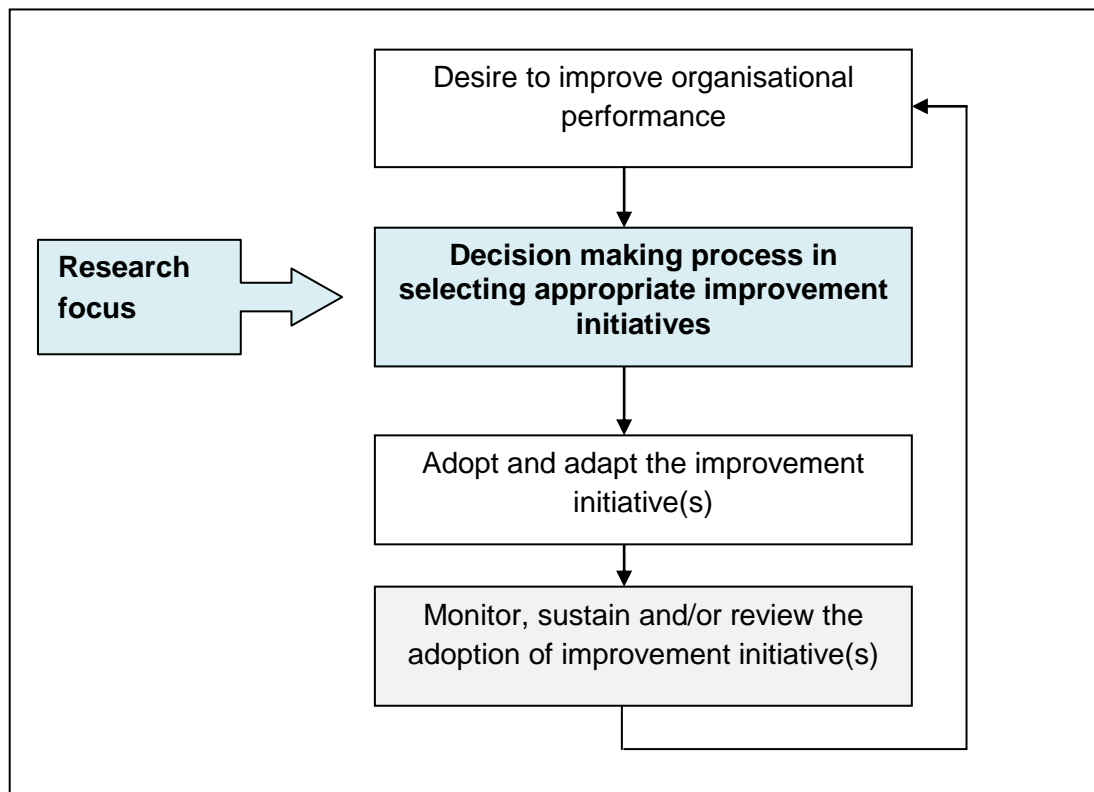


Figure 1.1: Research focus involving decision making process in selecting improvement initiatives

1.5 Importance of the research

Selection of improvement initiatives is an important area of research due to the following main reasons:

- Previous literature have highlighted the importance of selecting the right initiative for a given context or situation, such as Basu (2004b), Francis (2010), Hendra (2010) and Rigby and Bilodeau (2005). Selection processes will help organisations doing the right thing. As stated by Ackoff (1999, p. 10), “It is better to do the right thing wrong than to do wrong thing right. When we do the right thing wrong, we make mistake that can be corrected; hence we learn how to be more effective”. Therefore, selection and adoption of the most appropriate improvement initiative according to the situation are really crucial to the organisations.
- The adoption of initiatives requires time, resources, financial and knowledge (Thawesaengskulthai, 2007). To avoid unnecessary waste and frustration, it

would be better for people to select the right initiative that will fit with organisation's context and provide value to the organisation.

- Many organisations need guidance and advice on the selection of appropriate improvement initiatives due to a myriad of initiatives currently available and the number of initiatives is increasing every year (Thawesaengkulthai, 2007).
- Selection, management and/or integration of multiple improvement initiatives is an important quality issue in the future and become one of the main competencies required for future quality professional (Burnell, 2008).
- There is a relatively very few academic publications and only one PhD thesis (Thawesaengkulthai, 2007) have been found focussing on the selection of improvement initiatives. Therefore, this research is important to enrich the pool of reference materials and findings relating to this important subject matter.

A global on-line exploratory survey was conducted to investigate the importance of the research. The respondents of the survey were the practitioners, managers, consultants, and academicians who have good understanding and experience on improvement initiatives. Further details of this survey are discussed in Chapter 4. Fifty-nine (59) respondents answered the question related to this issue and all of them, 100%, agreed that the selection of suitable improvement initiatives is an important area of study. Thirty respondents (51% of total responses) indicated that the study is 'extremely important', 23 respondents (39%) indicated 'high importance' and the balance of six respondents (10%) indicated 'moderate importance'. All the interviewees also agreed that this study is important. This research also makes an original contribution to the body of knowledge and gives impact on practice, which will be discussed in Chapter 9.

1.6 Outline of the thesis

This thesis consists of nine chapters as depicted in Figure 1.2. The first chapter introduces the background, aim, objectives, scope, and importance of the research. Chapter 2 elaborates the critical review of literature related to the organisational improvement initiatives, main concepts and/or theories that can be used for the selection of improvement initiatives (Systems theory, Contingency theory, BE and rational decision making), and previous models on the selection of improvement initiatives. This chapter highlights primary literature and concepts that are relevant to the research as well as identifies gap in current knowledge of selecting improvement initiatives.

Chapter 3 describes the research design and methodology. This chapter consists of the selection of research design, research procedures, data collection methods, ensuring quality of research and ethical considerations. All the data collection methods (literature review, exploratory survey, semi-structured interviews, document review and evaluation survey) are briefly explained in this chapter. A detailed explanation on the planning, implementation and findings of the exploratory survey, interviews, and evaluation survey is provided in Chapter 4, 5 and 6. This study uses multiphase research design which comprises two research phases: (1) Development, evaluation and refinement of a conceptual model and (2) Development, evaluation and refinement of a guidance model. These two research phases are further discussed in Chapter 7 and 8.

Chapter 4 explains about the exploratory survey. It consists of the planning and implementation of the exploratory survey, profiles of survey respondents, and exploratory survey analysis and findings.

Chapter 5 describes about the semi-structured interviews. It comprises of the planning and implementation of the interviews, profiles of interviewees, and findings from the interviews. Results from the document review are indirectly explained in this chapter.

Chapter 6 explains about the evaluation survey. It consists of the planning and implementation of the evaluation survey, profiles of survey respondents, and evaluation survey analysis and findings.

Chapter 7 describes the first phase of research involving the development, evaluation and refinement of a conceptual model for selecting improvement initiatives. It comprises: (1) development of a conceptual model, (2) evaluation of the conceptual model and suggestions for improvement, (3) refinement of the conceptual model, and (4) evaluation of the refined conceptual model and suggestions for improvement.

Chapter 8 describes the second phase of research involving the development, evaluation and refinement of a guidance model for selecting improvement initiatives. It consists of: (1) development of a guidance model, (2) evaluation of the guidance model, and (3) refinement of the guidance model.

Chapter 9 concludes the main findings in relation to the research aim and objectives, explains the contributions of the research and describes the limitations of the research and suggestions for future research. This chapter also explains the linkages between research problem / issue, aim, objectives, data collection methods and sources of data (for example, see Figure 9.1).

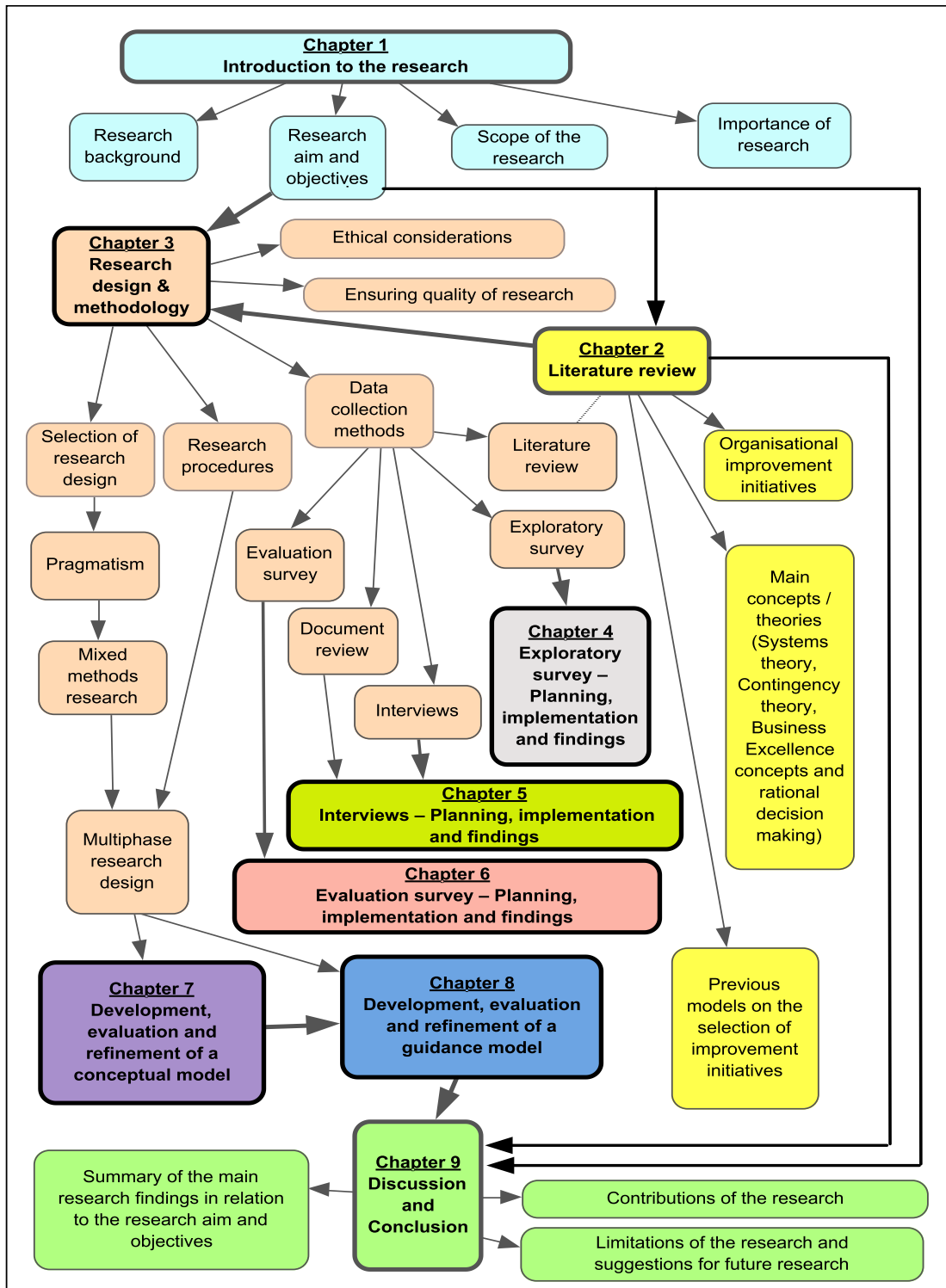


Figure 1.2: Outline of the thesis

Chapter 2: Literature Review

2.1 Introduction to the chapter

This chapter reviews the relevant literature related to the selection of organisational improvement initiatives. First of all, the term 'organisational improvement initiatives' is explained. Then, the four main concepts and/or theories that can be used in the selection of improvement initiatives are described: (1) contingency theory, (2) systems theory, (3) Business Excellence Models (BEMs), and (4) rational decision making. It is followed by explanation of previous improvement initiatives selection models. Finally, a conclusion for this chapter is presented.

2.2 Organisational improvement initiatives

Performance improvement, change and innovation are part and parcel of organisational life (Baxter & MacLeod, 2008). Organisations need to improve their performance in order to meet the purpose of their existence, and to satisfy and exceed the expectations of customers, employees, shareholders, supply chain partners, community and other stakeholders (Foley, 2010). Organisations should endeavour to improve faster than their competitors to stay ahead in their market segment.

In general, organisational improvement can be categorised into continuous improvement and breakthrough improvement (Imai, 1986; Slack et al., 2009). 'Continuous improvement', also known as 'Kaizen', is a never-ending, small and incremental performance improvement involving everyone in the organisation (Imai, 1986, 1997; Slack et al., 2009). It is normally people oriented, based on common sense and use a relatively low-cost approach (Imai, 1986, 1997). In contrast, the 'breakthrough' or 'innovation-based' improvement is a major and dramatic non-incremental performance improvement based on technological breakthrough and/or new inventions (Imai, 1986, 1997; Slack et al., 2009). According to Slack et al. (2009, p. 439), this type of improvement "can be expensive, often disrupting the ongoing workings of the operation, and frequently involving changes in the product/service or process technology". To survive in the 21st century, both types of

improvement should be adopted by the organisations in order to achieve performance excellence (Harrington, 1995; Thawesaengskulthai, 2007). In relation to this, Hayes et al. (2005) stated that:

The great risk of the incremental approach is being leapfrogged...by a competitor that abandons its traditional technology, location, or corporate strategy and adopts a new and more successful one...Conversely, the great risk of strategic leap approach is that a new breakthrough may not be available exactly when it is needed...An obvious response in such eventuality is for the company to adopt an incremental approach until a breakthrough does become possible. (p.286)

Harrington and Lomax (2000) and the Business Performance Improvement Resource website (www.bpir.com) have listed more than one thousand improvement initiatives that can be used by organisations. In addition to this, Cameron and Barnett (1999, p. 286) highlighted that: "the American Quality Foundation's (1992) survey of companies initiating quality improvement programs found that more than 945 quality tactics, tools, and techniques had been employed". It is also expected that the number of improvement initiatives will continue to increase every year concurrent with the increment of books and publications connected to performance and/or organisational improvement (Baxter & MacLeod, 2008; Davenport et al., 2003).

Organisational improvement initiatives are also known as management tools (Rigby & Bilodeau, 2005), quality management and improvement initiatives (Thawesaengskulthai, 2007), business process improvement methodologies (Bendell, 2005) and performance improvement methods (Harrington & Lomax, 2000). These improvement initiatives were mostly developed by the management gurus, consultants, academics and/or practitioners (Baxter & MacLeod, 2008; Davenport et al., 2003; Greatbatch & Clark, 2005). Improvement initiatives in the present context refer to approaches, management systems, tools and/or techniques (Van der Wiele et al., 2007). Definitions of an approach, management system, tool and technique together with some examples of initiatives are provided in Table 2.1. Each improvement approach (e.g. Six Sigma, Lean, Total Quality Management [TQM], Business Process Reengineering [BPR]) has its own set of management systems, tools and/or techniques. For example, the following tools and techniques are widely used in the adoption of Six Sigma: Statistical Process Control (SPC),

Failure Mode and Effect Analysis (FMEA), Quality Function Deployment (QFD), and Control Chart (Ricondo & Viles, 2005). As for TQM, the following management systems, tools and techniques may be used: ISO9000, Control Chart, Cause and Effect Diagram, QFD, and Benchmarking (Hellsten & Klefsjö, 2000).

Table 2.1: Definitions and examples of approach, management system, tool and technique for improving organisational performance

No	Item	Definition	Examples
1	Approach	An approach needs resources (e.g. training, hiring additional and specific personnel), senior management commitment, strategic planning and an "intellectual effort in term of its deployment and adoption" (Van der Wiele et al., 2007, p. 561).	TQM, BPR, Six Sigma, Lean
2	Management system	"A system comprises written information in the form of instructions and procedures in order to direct and control some form of operation" (Van der Wiele et al., 2007, p. 561)	Quality Management System (ISO9000), Environmental Management System (ISO14000), Occupational Health and Safety Management System
3	Tool	A tool can be "described as a device which has a clear role and defined application. It is often narrow in its focus and can be and is usually used on its own" (Dale, 1993, as cited in Van der Wiele et al., 2007, p. 562)	Cause and Effect Diagram, Pareto Diagram, Control Chart, Histogram, Relationship diagram, Flowchart
4	Technique	A technique "has a wider application than a tool". It requires "more thought, skill, knowledge, understanding and training to use them effectively. A technique may even be viewed as a collection of tools" (Dale, 1993, as cited in Van der Wiele et al., 2007, p. 562)	SPC, Benchmarking, QFD, FMEA

These improvement initiatives can be linked, aligned and/or integrated in order to eliminate redundancies and improve system efficiency and effectiveness. Six Sigma is widely integrated with Lean and known as Lean Six Sigma (Arnheiter & Maleyeff, 2005; Byrne, Lubowe, & Blitz, 2007). Ricondo and Viles (2005) explains how Six Sigma can be linked to TQM, BPR, Lean and the Learning Organisation. Numerous literature also discusses about the integration of Quality Management System (e.g. ISO9001), Environmental Management System (e.g. ISO14001) and/or Occupational Health and Safety Management System (e.g. OHSAS 18001), including Abarca (1998), Douglas and Glen (2000), Karapetrovic and Willborn (1998), Mohammad, Osman, Yusuff, and Ismail (2005) and Zutshi and Sohal (2005).

Slack, et. al. (2009) and Slack and Lewis (2008) summarise several expected benefits of adopting these improvement initiatives which include but are not limited to:

- Improve quality (e.g. reduce defects per units, reduce level of customer complaints).
- Improve dependability (e.g. reduce percentage of orders delivered late, better schedule adherence).
- Improve speed (e.g. improve order lead time, improve cycle time).
- Better flexibility (e.g. reduce time needed to develop new products / services, better range of products / services).
- Reduce cost (e.g. reduce cost per operation hour, better utilisation of resources, reduce transaction cost, improve labour productivity).

2.3 Main concepts and/or theories that can be used for the selection of organisational improvement initiatives

This section explains four main concepts and/or theories that can be used for the selection of organisational improvement initiatives: (1) Systems theory, (2) Contingency theory, (3) BE, and (4) Rational decision making.

2.3.1 Systems approach in selecting and managing organisational improvement initiatives

Kast and Rosenzweig (1985, p. 15) define a system as “an organized, unitary whole composed of two or more interdependent parts, components, or subsystems and delineated by identifiable boundaries from its environmental suprasystem”. A system can also be defined as “a complex whole the functioning of which depends on its parts and the interactions between those parts” (Jackson, 2003, p. 3).

Systems approach helps people to be aware about the “interrelationships among sub-systems” and “interactions between system and its suprasystem” (Kast & Rosenzweig, 1985, p. 15). According to Ackoff (1999):

A system is a whole that cannot be divided into independent parts without loss of its essential properties or functions...For example, no part of an automobile by itself can transport a person from one place to another, nor can any part of a person live when separated from him or her. (p.8)

In addition to this, Ackoff (1999) also highlighted that:

When the performances of the parts of a system, considered separately, are improved, the performance of the whole may not be (and usually is not) improved...The performance of a system depends on how its parts interact, not on how they act taken separately. (p.9)

Therefore, it is crucial to use systems and holistic approach in managing organisational improvement as opposed to the piecemeal approach (Kast & Rosenzweig, 1985). With regards to the selection of improvement initiatives, it is also important to consider whether the initiatives to be used are compatible and can interact well with the existing and future organisation system (Dale, 2007).

Subsequently, it is also important to understand feedback mechanism in a system. Kast and Rosenzweig (1972) stated that:

Information concerning the outputs or the process of the system is fed back as an input into the system, perhaps leading to changes in the transformation process and/or future outputs. Feedback can be both positive and negative...Negative feedback is informational input which indicates that the system is deviating from a prescribed course and should readjust to a new steady state. (p. 450)

In general, systems can be categorised as closed and open system. According to Kast and Rosenzweig (1972):

Open systems exchange information, energy, or material with their environments. Biological and social systems are inherently open systems; mechanical systems may be open or closed...The open system can be viewed as a transformation model. In a dynamic relationship with its environment, it receives various inputs, transforms these inputs in some way, and exports outputs...systems have boundaries which separate them from their environments. The concept of boundaries helps us understand the distinction between open and closed systems. The relatively closed system has rigid, impenetrable boundaries; whereas the open system has permeable boundaries between itself and a broader suprasystem. (p.450)

Modern organisation theories consider the organisation as an open system as opposed to the traditional organisation theories that view the organisation as a closed system (Ashmos & Huber, 1987; Kast & Rosenzweig, 1985). Organisation can also be seen as a system that consists of various subsystems and as a subsystem of a larger external environment system (Johnson, Kast, & Rosenzweig, 1964). Examples of the subsystems within the organisation system are quality system, financial and costing system, human resources system, management information system and production system. Meanwhile, external environment systems of an organisation include external political system, economic system, social system, technological system, legal system and environmental system (Karapetrovic & Willborn, 1998; Kast & Rosenzweig, 1985).

By adopting a systems approach in managing organisational improvement, people should be able to understand that the organisation consists of various interlinked processes that convert input (e.g. materials, money, human resources, information) into output (e.g. products, services, stakeholder satisfaction) and interact with its external environment in order to achieve the goal and purpose of its existence. Better output can be obtained by improving the input and processes within the organisation's system (Dean & Bowen, 1994; Kast & Rosenzweig, 1985). The concept of input, process and output will also be incorporated in the development of a guidance model for selecting improvement initiatives.

2.3.2 Contingency approach in selecting and managing organisational improvement initiatives

According to Kast and Rosenzweig (1985):

The contingency view seeks to understand the interrelationships within and among subsystems as well as between the organization and its environment and to define patterns of relationships or configurations of variables... Contingency views are ultimately directed toward suggesting organizational designs and managerial actions most appropriate for specific situations. (p.116)

Kast and Rosenzweig (1985) also added that:

The essence of this view is that there is no one best way and that there is a middle ground between 'universal principles' and 'it all depends'. This approach recognize the complexity involved in managing modern organizations but uses the existing body of knowledge to relate environment and design, to match structure and technology, to integrate strategy and tactics, or to determine the appropriate degree of subordinate participation in decision making, given a specific situation. (p.18)

Many existing literature have highlighted the importance of using contingency approach in managing organisation and understanding complex and dynamic situations, for instance Donaldson (2001), Koontz and O'Donnell (1976), Lawrence and Lorsch (1967), and Sousa and Voss (2008). In relation to this, several examples of main contingency factors that should be considered in selecting appropriate initiatives have been included in the guidance model. Since every organisation is unique, there is no one best initiative that can solve all organisational problems. Each initiative also has its own purpose, strengths and limitations. The most appropriate initiative depends on the context in which it is adopted, rather than assumed to be universally applicable. Managers and/or leaders in the organisations should therefore consider all related contingency factors before selecting the right initiative for the situation. The examples of contingency factors include but are not limited to:

- Capability of the workforce to implement the improvement initiatives (NIST, 2010; Thawesaengkulthai, 2007; Thawesaengkulthai & Tannock, 2008a).
- Organisational culture (Sousa & Voss, 2008; Thawesaengkulthai, 2007; Thawesaengkulthai & Tannock, 2008a).
- Top management commitment and support (Benson et al., 1991; Saunders & Mann, 2007; Thawesaengkulthai, 2007; Thawesaengkulthai & Tannock, 2008a).
- Expected costs, time and resources needed to introduce and implement the initiatives successfully (Dale, 2007).
- Vision and mission of the organisation (Thawesaengkulthai, 2007; Thawesaengkulthai & Tannock, 2008a).
- Direction, strategic plan and goals of the organisation (Thawesaengkulthai, 2007; Thawesaengkulthai & Tannock, 2008a).

- External environment in which the organisations operate, which includes: political, economic, social, technological, legal and environmental factors (Capon, 2004).
- Level of organisational excellence maturity (Dahlgaard & Dahlgaard-Park, 2004; NIST, 2010).
- Ability of the initiative to “fit in with, complement”, integrate, and/or “support” other initiatives “already in place, and might be [used] in the future” (Dale, 2007, p.338).
- Types (e.g. private, public or non-profit) and sizes (e.g. small, medium or large) of the organisation (Benson, et al., 1991; Dahlgaard & Dahlgaard-Park, 2004; NIST, 2010; Thawesaengskulthai, 2007; Thawesaengskulthai & Tannock, 2008a).
- Expected value / benefit of using the initiative (Thawesaengskulthai, 2007; Thawesaengskulthai & Tannock, 2008a, 2008b).
- Areas in which the initiatives will be used (Saunders & Mann, 2007).

2.3.3 Business Excellence Models (BEMs) as a guiding framework for selecting and managing multiple organisational improvement initiatives¹

There are many definitions of BE and it varies depending on the areas of study. Several definitions of BE based on Quality Management area are listed as follows:

- “Excellence in strategies, business practices, and stakeholder²-related performance results that have been validated by assessments using proven business excellence models” (Adebanjo & Mann, 2008b, p. 1).
- “Overall way of working that balances stakeholders concerns and increases the probability of long-term organisational success through operational, customer-related, financial, and marketplace performance excellence”

¹ A large part of this section was published in the International Journal of Total Quality Management and Business Excellence (see Mohammad, Mann, Grigg, & Wagner, 2011a).

² Stakeholder is defined as “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 1984; Jones, 1995; Kreiner & Bhambri, 1988) (reported in Mitchell, Agle, & Wood, 1997, p. 869). According to European Foundation for Quality Management (EFQM) (2010, p. 2), stakeholder includes the “person, group or organisation that has a direct or indirect stake or interest in the organisation because it can either affect the organisation or be affected by it.”

(Bergquist, Foley, Garvare, & Johansson, 2000, p. 517; Edgeman, Dahlgaard-Park, Dahlgaard, & Scherer, 1999, p. 49)

- “Business aim (that circumstance where all stakeholders are satisfied), and [total] quality management ... as the means of achieving that aim” (Foley, 2004, p. 13).

BE is also known as Organisational Excellence. The term “Organisational Excellence” emerged to imply inclusion of public and not-for-profit organisations (Dalrymple et al., 1999; McAdam, 2000). Many BE concepts, frameworks and models were developed since 1980s, mainly as a result of quality movement in Japan and USA (Adebanjo & Mann, 2008b). Examples of the BE concepts and models include Peter’s and Waterman’s eight excellence attributes (1982), Peter’s and Austin’s excellence model (1985), Baldrige Criteria for Performance Excellence (CPE) (first developed in 1987), European Foundation for Quality Management (EFQM) Excellence Model (first developed in 1992), Kanji’s BE Model (2001), and Dahlgaard’s and Dahlgaard-Park’s 4P excellence model (2004).

This research focuses on BEMs used within quality and BE award programmes, due to the validity and wide usage of these models. This type of BEM includes the Baldrige CPE (NIST, 2010) and the EFQM Excellence Model (EFQM, 2009). According to Grigg and Mann (2008b, p. 1176), various researchers have “statistically tested and validated” the design, criteria and items of the major BEMs using techniques including simple bivariate correlation (Saunders & Mann, 2005); path analysis (Flynn & Saladin, 2001); and Covariance Based Structural Equation Modelling (Lee, Rho, & Lee, 2003; Wilson & Collier, 2000). As reported by Grigg and Mann (2008a, p. 234; 2008b, p. 1173), BEMs are adopted for Quality / BE Awards by more than 80 countries. Further research by the author of this thesis in 2010 (which was commissioned by Baldrige Performance Excellence Program, NIST, USA) revealed that there were 94 national Quality / BE Awards used in 83 countries worldwide. Appendix 1 lists the awards together with their adopted BEMs and administrative organisations. This information is important for the users and potential users of BEMs as well as the organisations entrusted to administer the national quality / BE award. This list was developed based on data from Quality / BE award administrators, an internet search conducted between 9th and 13th of January 2010 and latest updated on November 2010, as well as data from a comprehensive literature review (Calingo, 2002; Mavroidis, Toliopoulou, & Agoritsas, 2007; Sharma

& Kodali, 2008; Tan, 2002; Tan, Wong, Mehta, & Khoo, 2003). An early version of this list is available on the Baldrige Performance Excellence Program website (refer to Mohammad & Mann, 2010).

The data presented in Appendix 1 indicates that the EFQM Excellence Model and the Baldrige CPE are the two most widely used BEMs. The EFQM Excellence Model is used in 30 countries on two continents - Europe (e.g. Austria, Northern Ireland, Sweden, Italy, and Portugal) and Asia (India, Turkey and United Arab Emirates). Meanwhile, the Baldrige CPE is used in 8 countries on four continents, including Northern America (United States of America), Asia (Hong Kong, Indonesia, Philippines, Thailand and Sri Lanka), Oceania (New Zealand), and Europe (Sweden). Many countries are also using their own national bespoke model, such as Japan (Deming Prize) and Australia (Australian BE Award). In addition, some countries have more than one national quality / BE awards, such as India, Japan, Malaysia, United Arab Emirates, Greece and Hungary. In Sweden, organisations can choose one of the following BEMs when applying for Swedish Quality Award: (1) the Baldrige CPE (see item 6 in Appendix 1); (2) the EFQM Excellence Model (see item 34 in Appendix 1); or the Swedish bespoke model (see item 80 in Appendix 1). In contrast, Bahrain does not have any national quality / BE award to date, but many public sector organisations are using a bespoke model based on the EFQM Excellence Model, which is administered by the Bahrain Centre for Excellence (see item 60 in Appendix 1).

In general, a BEM can be considered as a TQM framework (Adebanjo, 2001; Adebanjo & Mann, 2008b; Bou-Llusar, Escrig-Tena, Roca-Puig, & Beltran-Martin, 2009; Dale, Van der Wiele, & Van Iwaarden, 2007a). More specifically, the BEM can be described as a non-prescriptive organisational framework based on several main criteria that can be categorised as 'enabler' and 'result' (Dahlgaard-Park, 2008; EFQM, 2003; NIST, 2010). Dahlgaard-Park (2008) summarised that:

The "Enabler" criteria cover what an organisation does. The "Result" criteria cover what an organisation achieves. "Enablers" cause "Results". (p. 106)

Table 2.2 shows the common criteria of BEMs based on comparison of major BEMs and previous research. The descriptions of the common enabler criteria of BEM and their core values and concepts are presented in Table 2.3. These core values and concepts of BEM are based on attributes, beliefs and/or behaviours of high performing organisations (NIST, 2010; New Zealand Business Excellence Foundation [NZBEF], 2009).

Table 2.2: Common criteria of BEMs based on comparison of major BEMs and previous research

Category	Common Criteria	Baldrige CPE 2011 - 2012 (NIST, 2010)	EFQM Excellence Model 2010 (EFQM, 2009)	Bohoris (1995)	Puay, Tan, Xie, & Goh (1998)	Tan (2002)
Enablers	1. Leadership and social responsibilities	1.Leadership	1.Leadership	1.Leadership	1.Leadership	1.Leadership system
					2.Impact on society	2.Impact on society
	2. Strategy	2.Strategic planning	2.Strategy	2.Strategy and policy	3.Strategy and policy	3.Strategy and policy planning
	3. Customer focus	3.Customer focus	3.Processes, products and services	3.Customer management and satisfaction	4.Customer management and satisfaction	4.Customer management and satisfaction
	4. Process management	4.Operations focus		4.Process quality	5.Process quality	5.Process management
	5. Workforce focus	5.Workforce focus	4.People	5.Human resource management	6.Human resource management	6.People management
6. Partnership and resources	6.Measurement, analysis and knowledge management	5. Partnership and resources	6.Resources Management	7.Resources management	7.Resources	7.Resources
					8.Information and analysis	8.Suppliers / partners management and performance
Results	7. Results	7. Results	6.People results	7.Results	9.Results	10.Business results
			7.Customer results			
			8.Society results			
			9.Key results			

Table 2.3: Descriptions of the common enabler criteria of BEM and their core values and concepts

Common enabler criteria of BEM	Brief descriptions	Core values and concepts
1. Leadership and social responsibilities	Focuses on leader's behaviour and leadership system in shaping the future and building culture of excellence in the organisation (EFQM, 2009; NIST, 2010; Puay, et al., 1998; Standards, Productivity, and Innovation Board Singapore [SPRING], 2007), as well as, organisation's governance systems, responsibilities and contribution to society, community and environment (EFQM, 2009; NIST, 2010; Puay, et al., 1998; Tan, 2002).	Leading with vision, inspiration and integrity; systems perspective; and taking responsibility for a sustainable future (EFQM, 2009; NIST, 2010).
2. Strategy	Focuses on how the organisation develops, communicates, deploys, measures, monitors, reviews and / or improves its strategy to achieve organisational success and sustainability (EFQM, 2009; NIST, 2010; Puay, et al., 1998; Tan, 2002).	Visionary leadership; focus on the future; nurturing creativity and innovation; and agility (EFQM, 2009; NIST, 2010).
3. Customer focus	Focuses on how the organisation determines customers and market needs and expectations; builds relationships with customers; uses customer information to improve and identify opportunities for innovation; and determines customer satisfaction for long-term marketplace success (EFQM, 2009; NIST, 2010; Puay et al., 1998; SPRING, 2007; Tan, 2002).	Customer-driven excellence; focus on results; and creating value (EFQM, 2009; NIST, 2010).
4. Process management	Focuses on the design, management, evaluation, and improvement of various work systems and work processes in the organisation in order to fully satisfy, and generate increasing value for customers and other stakeholders (EFQM, 2009; NIST, 2010; Puay et al., 1998; Tan, 2002).	Organisational learning; nurturing creativity and innovation; focus on results and creating value; agility; and systems perspective (EFQM, 2009; NIST, 2010).
5. Workforce focus	Focuses on how the organisation engages, manages, values, recognises and develops the workforce to utilise its maximum potential in alignment with the organisation's overall mission, strategy and plan (EFQM, 2009; NIST, 2010; Tan, 2002).	Personal learning; valuing workforce members; focus on results and creating value; succeeding through people; and nurturing creativity and innovation (EFQM, 2009; NIST, 2010).
6. Partnership and resources	Focuses on how the organisations plan, manage, measure, analyse and improve external partnerships, suppliers and internal resources (such as information and knowledge, financial, materials, natural resources, buildings, equipment, technology, and intellectual property) in order to support strategy and the effective operation of work processes (EFQM, 2009; Puay et al., 1998; Tan, 2002).	Building partnerships; management by fact; focus on results and creating value; and nurturing creativity and innovation (EFQM, 2009; NIST, 2010)

Note: These descriptions were included in the proposed guidance model (see Supplement B in Appendix 8, page A8.11)

Dahlgaard-Park (2008) has analysed the EFQM Excellence Model from six management control perspectives involving: (1) Bureaucratic and mechanic view of control, (2) Cybernetic view of control, (3) Agency view of control, (4) Human resource view of control, (5) Contingency view of control and (6) Cultural view of control. In addition, Dahlgaard-Park (2008, p. 111) found that “all the criteria [of the model] show more or less interrelationships with the six management control theories” and concluded that “the model can be considered as a holistic and integrative approach, where strategic, managerial and operational control processes are integrated in the model”. On the other hand, Dahlgaard-Park (2008) also highlighted the disadvantages and limitations of the EFQM Excellence Model, which includes: (1) less attention is given to contextual / contingency factors; (2) not being able to include all possible variables and all aspects of real situation due to the nature of a model that only represent a generalised and simplified version of a reality; and (3) the actual practice is not always consistent with the expectation when using the model.

BEMs are widely used as a basis for evaluating the performance of Quality / BE Award applicants as well as to identify the winners of the award (Adebanjo & Mann, 2008b; Tan et al., 2003). Although numerous organisations have participated in the BE award programmes, the main purpose of using the BEMs should be for organisational performance improvement rather than merely receiving the award (Dahlgaard-Park & Dahlgaard, 2007).

Most of the previous studies into BEMs mainly focused on the design and/or validation of BEMs (Dahlgaard-Park & Dahlgaard, 2007; Evans & Jack, 2003; Flynn & Saladin, 2001; Husain, Abdullah, Idris, & Sagir, 2001; Jayamaha, Grigg, & Mann, 2009), the usage of BEMs for quality / BE awards (Eriksson & Garvare, 2005; Grigg & Mann, 2008b), the usage of BEMs for organisational assessment (Ritchie & Dale, 2000; Shergold & Reed, 1996; Williams, Bertsch, van der Wiele, Van Iwaarden, & Dale, 2006) as well as the usage of BEMs for benchmarking and best practices (Adebanjo & Mann, 2008a; Mann & Grigg, 2004). Minimal literature used BEMs as a guiding and/or overarching frameworks for selecting and managing multiple improvement initiatives (such as, Brown & Pemberton Planning Group Ltd., 2008; Saunders & Mann, 2007).

In relation to the usage of BEMs as an overarching framework, Jamie Ambrosi, Deputy Director of Baldrige Performance Excellence Program (as cited in Mann, 2011) highlighted that:

I think where organizations get off track is when they think Baldrige is just an initiative, rather than a model for organizing and managing the enterprise and all its initiatives. If Baldrige is reduced to an initiative, rather than an overall model and a way of thinking, then organizations can say they have done it and moved on. We see this all the time. But in organizations that embrace the Baldrige Framework as an overarching model, they never move beyond it. This includes very high-performing organizations, including our Award recipients. (p.109)

Supporting the same issue, Joe Goasdoue, Chief Executive of the British Quality Foundation (as cited in Francis, 2010), explains that:

While there are numerous management tools and techniques commonly used, the EFQM excellence model provides a holistic view of the organisation and it can be used to determine how these different methods fit together and complement each other. The model can therefore be used in conjunction with any number of these tools, based on the needs and function of the organisation, as an overarching framework for developing sustainable excellence. (p.30)

The proposed guidance model utilised the BEM as a guiding framework for selecting and managing multiple improvement initiatives. Part of the model shows some examples of the most common improvement initiatives that can be adopted towards BE, which are arranged according to the common enabling criteria of BEMs and levels of BE maturity. In this study, common enabling criteria of BEMs represent areas for improvement. This feature can help organisations to choose appropriate improvement initiatives by narrowing down the options according to the areas for improvement and BE maturity.

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