Building Preparedness for Mergers and Acquisitions
  - The role of Enterprise Architecture Practice

A thesis submitted in the partial
fulfilment of the degree of Master of Information Technology with Honours
at the School of Information and Communication Technology
Griffith University, Australia
June 2011

By
Nilesh VANIYA
S2696276

The copyright on this report is held by the author.
Permission has been granted to the School of ICT to keep a reference copy of this report.
Statement of Originality:

“The material presented in this report contains all my own work, and contains no material previously published or written by another person except where due acknowledgement is made in the report itself.”

Student’s Signature: ______________
Date: ______________
Dedication

I would like to dedicate this work to my dearest Gurumayiji, my parents (Laxmanbhai and Bhartiben) and my lovely family (Tarun, Avani, Chintan, Vaishali, Hans and Dipika). Without their continuous blessings and support this work was never under my reach.
Any journey requires strong will, toil and determination, but without the support of wonderful people
around you reaching the destination remains a distant dream. In the journey to the completion of this
project, I also required immense help and support of many people without whom the end was nowhere in
sight.

I would like to express my gratitude towards Peter Bernus (my supervisor and lifeline for this project) for
his continuous support, guidance, encouragement, patient advices, motivation, and tips and strategies to
enhance my academic writing skills as well as critical judgemental skills. These were some of the
contributions he has made not only for the purpose of this thesis but for my lifelong learning and
academic writing. Once more I have proved to myself, my father and Peter that together with his support
there is no mountain I can’t climb.

I would like to thank some special researchers whose research had helped me extensively to strengthen
my idea and to pursue this project – Ovidiu Noran, John Mo and Laszlo Nemes. Ovidiu’s meta-
methodology has guided the critical aspect of this research - model development. I would like thank John
and Laszlo for their joint research proposing the use of EA practice in M&A. Before reaching to their
research article, I had attempted the same in my preliminary efforts, however their research had
supported me to formalise and enhance my preliminary efforts.

I am indebted for the advices of Sue Nielsen who was my mentor for a Research Method course. Her tips
had direct contributions to the key aspects of this thesis, specially the research method section.

It is my pleasure to thank my father not only for providing me moral support but for nurturing the values
and innovativeness which enables me to think unconventionally and come up with novel ideas / solutions.
I would like to thank my family - specially my mother whose blessings had motivated and supported me
during the lifespan of this project.

Lastly, I offer my regards and blessings to all of those who supported me in any respect during the
completion of the project.

Nilesh Vaniya
Abstract
Mergers and Acquisitions (M&A) are becoming central for medium to large scale organisations due to several reasons such as globalization, market competition, need for product/service innovation, changes in regulations, economic and environmental changes, etc. Organisations use mergers and acquisition as an option to address significant strategic management issues caused by one or more of the above business imperatives. Apparently, mergers and acquisitions lead to potential organisational changes including change in current business processes and information systems in use. Unfortunately researchers and practitioners have found that more than half of the deals fail to achieve the results aimed for. An important conclusion of M&A research to date is that a major issue in mergers and acquisitions is the need for long-term integration planning and the time needed for the implementation.

This thesis argues that if strategic management consider M&A as possible future options then it is both necessary and possible to build M&A preparedness well before a Merger or Acquisition decision is contemplated. Having such preparedness a) will improve management's ability to predict the feasibility, cost, risk and time needed to complete a Merger or Acquisition, b) will allow a comprehensive post-merger integration planning to be completed in a timely manner, and c) will shorten the time as well as reduce the cost and risk of post M&A integration. This research demonstrates how an enterprise's strategic management can consider the necessary level and type of preparedness, as well as orchestrate the building of such preparedness. The method used in this paper originates in Enterprise Architecture (EA) practice applied to the whole of the enterprise (as opposed to the often used view of EA that restricts it to the change management of IT systems only).
# Table of Contents

Abstract ........................................................................................................................................................ iv 

List of Tables ................................................................................................................................................ vii 

List of Figures ............................................................................................................................................. viii 

1.0 Introduction ........................................................................................................................................ 1 

1.1 Research Context ................................................................................................................................ 1 

1.2 Research Aim ...................................................................................................................................... 4 

1.3 Research Significance ......................................................................................................................... 5 

1.4 Expected Research Outcome ............................................................................................................. 5 

2.0 Literature Review .............................................................................................................................. 7 

2.1 Literature Review ................................................................................................................................. 7 

2.1.1 What to consider for M&A Preparedness? ................................................................................... 8 

2.1.2 How to plan Post-Merger Integration? .......................................................................................... 9 

2.1.3 How to implement Post-Merger Integration? .............................................................................. 11 

2.2 Gaps in Theory and Practice ............................................................................................................. 13 

2.3 The Research question ..................................................................................................................... 16 

3.0 Research Framework ...................................................................................................................... 17 

3.1 Selection of Research Framework .................................................................................................... 17 

3.2 Components of the selected framework .......................................................................................... 18 

3.2.1 Entity Types ................................................................................................................................ 18 

3.2.2 Generalized Enterprise Reference Architecture (GERA) ........................................................... 19 

3.3 Suitability of the Research Framework .............................................................................................. 25 

4.0 Research Methodology ................................................................................................................... 27 

4.1 Research Method ........................................................................................................................ 29 

4.1.1 Research Method ........................................................................................................................ 29 

4.1.2 Research Outcome and Theory Building Process ...................................................................... 31 

4.1.3 Example of a Conceptual Analytical Research ........................................................................... 33 

4.1.4 Systems Approach ...................................................................................................................... 34 

4.2 Research Approach .................................................................................................................... 36 

4.3 Theory Derivation Approach .......................................................................................................... 39 

4.4 Data Collection and Analysis ........................................................................................................... 40 

4.5 Ethical Considerations ................................................................................................................... 41 

4.6 Research Relevance to theory and practice ................................................................................... 41 

4.6.1 Contribution to theory .............................................................................................................. 42 

4.6.2 Contribution to practice ............................................................................................................ 42
# M&A Preparedness Building

## 5 M&A Preparedness Building as a Strategic Program

### 5.1 Identification of Enterprise Entities

### 5.1.1 Identification of Tasks

### 5.1.3 Summary of Identified Entities and their Tasks

### 5.2 Dynamic Business Model of the Preparedness Building Transformation

### 5.3 The timeline of M&A Preparedness Building

#### 5.3.1 Life History

#### 5.3.2 Life History Model of the M&A PBSP

### 5.4 Summary of the M&A Preparedness Building

## 6 Conclusion and Future Work

### 6.1 Conclusion

### 6.2 Rigor, Validity and Reliability

### 6.3 Future Work

## 7 References

### Appendix A: Ethical Clearance
List of Tables
Table 1: Research Assumptions and Strategy............................................................................................ 36
Table 2: Planning of M&A Preparedness Building (discussion)................................................................. 47
Table 3: List of Identified Enterprise Entities for M&A Preparedness Building......................................... 51
Table 4: Summary of involved enterprise entities and their key tasks...................................................... 57
Table 5: Summary of Abbreviations.......................................................................................................... 60
Table 6: M&A Preparedness Building Strategic Program (M&A PBSP) Part (a)....................................... 115
Table 7: M&A Preparedness Building Strategic Program (M&A PBSP) Part (b)....................................... 116
Table 8: M&A Preparedness Building Strategic Program (M&A PBSP) Part (c)....................................... 117
List of Figures
Figure 1: M&A Classification .........................................................................................................................2
Figure 2: Decomposition of Merger Process suggested by Mehta and Hirschheim (2007) .........................8
Figure 3: The timeline (stages) of the proposed M&A Process including preparedness building ..............15
Figure 4: GERA Modelling Framework .......................................................................................................20
Figure 5: GERA Modelling Framework with Modelling Views ...................................................................21
Figure 6: GERA Entity lifecycle relationship and Entity recursion ..............................................................24
Figure 7: Research Process ..........................................................................................................................27
Figure 8 Jarvinen's taxonomy of Research Methods ..................................................................................30
Figure 9 Theory Building Process ...............................................................................................................33
Figure 10: A systems approach in M&As ....................................................................................................35
Figure 11: The Positivist Research’s relationship with existing research ...................................................37
Figure 12: Four Research Paradigms .........................................................................................................38
Figure 13 Theory Derivation Approaches ...................................................................................................39
Figure 14 EA view of M&A issues: Preparedness Building has to attend to all three aspects (Business, IS, and HRM) ........................................................................................................................................44
Figure 15: Development Process of A meta-methodology for M&A Preparedness Building ......................46
Figure 16: Description of symbols of a Dynamic Business Model ..................................................................59
Figure 17: Dynamic Business Model of M&A PBSP (Part - A) ..................................................................61
Figure 18: Dynamic Business Model of M&A PBSP (Part - B) ..................................................................65
Figure 19: Dynamic Business Model of M&A PBSP (Part - C) ..................................................................68
Figure 20: Life History Model of M&A PBSP (Stage 1) ...............................................................................72
Figure 21: Life History Model of M&A PBSP (Stage 2) ...............................................................................74
Figure 22: Life History Model of M&A PBSP (Stage 3) ...............................................................................76
Figure 23: Life History Model of M&A PBSP (Stage 4) ...............................................................................78
Figure 24: Life History Model of M&A PBSP (Stage 5) ...............................................................................80
Figure 25: Life History Model of M&A PBSP (Stage 6) ...............................................................................82
Figure 26 Life History Model of M&A PBSP (Stage 7) ...............................................................................86
Figure 27: Life History Model of M&A PBSP (Stage 8) ...............................................................................88
1.0 Introduction

Mergers and Acquisitions (M&As) are considered as key strategic options for an enterprise’s management. M&As have achieved high prominence in almost every industry due to key factors such as globalisation (Andraid, Mitchell & Stafford, 2001), market competition (Andraid, Mitchell & Stafford, 2001) and their wide use in market expansion strategies (De Hilal, Wetzel & Ferreira, 2009). M&As have been practiced since many decades in general, however, M&As in the Banking Industry became very important since the early 1990s (Rodriguez, 2008). It is therefore surprising, as Alaranta and Henningsson (2008) note, that the majority of M&A deals fail to achieve the aimed synergies. The argument of business researchers (Larsson & Finkelstein, 1999; Cartwright & Schoenberg, 2006), IS researchers (Mehta & Hirschheim, 2007; Stylianou, Jeffries, & Robbins, 1996; Alaranta, & Henningsson, 2008) and HR researchers (Rodriguez, 2008; Schuler, & Jackson, 2001) can be summarised by highlighting the key reasons of such high failure rate, notably several typical issues (i.e. business, HR and IS) related to post-merger integration. Post-merger integration covers various enterprise wide integration efforts, and some of them are critical for the success of the deal such as Business- (frequently referred as ‘Operation’ or ‘Business Operation’) and Management Integration, Human Resources (HR) integration, as well as Information Systems (IS) integration. Major concerns of such post-merger integration efforts are in the post-merger integration planning which should prepare the involved enterprises for the post-merger integration.

Given the above situation, this research is raising the following two questions:

(a) How to develop preparedness for the post-merger integration? And
(b) How to plan and organize the implementation of post-merger integration?

Further discussion illustrates the overall context associated with the above two integration aspects of M&As.

1.1 Research Context

M&A are well defined in the literature and they have been studied from various aspects across diverse disciplines such as Strategic Business Management, Human Resource Management, Organisational Behaviour & Change Management, Information systems and Information and Communication Technology. The following discussion provides the definitions of key terms used widely in this report.

Acquisitions: “An acquisition is defined as an act of exchange by which a company, called here a bidder company, uses money, stocks or their combination, to acquire some assets (technical and/or financial) of the target company” (Giacomazzi, Panella, Pernici & Sansoi, 1997, pg. 290). Hence acquisition is the case when a company buys a part or whole of another company.
Mergers: “Mergers always realize a combination between two or more companies by crossing their stocks, and thus concentrating on all the components of the companies involved in the operation of only one company” (Giacomazzi et. al., 1997, pg. 290). In simple words, Merger is the case when two or more organisations decide to establish a single organisation at a cost to all involved organisations. Hence, after mergers there remains a single organisation that encompasses all the involved organisations.

Kumar (2009, pg. 146) categorises mergers into three types: Horizontal, Vertical or Conglomerate. There exist diverse classifications of mergers, however, this classification is referred widely and is suitable for our research focus. Our research focus will be on Horizontal mergers as vertical mergers and conglomerate mergers are simpler in terms of their integration preparation. Napier (1989) suggests that Horizontal Mergers generally referred to as “Mergers of Equals”.

The following diagram summarizes the categories of mergers and acquisitions.

![Diagram of M&A Classification]

**Figure 1: M&A Classification**
Synthesized from Kumar (2009), Napier (1989), and Mehta and Hirschheim (2007)

Preparedness: According to the World English Dictionary, Preparedness (n.d.) is defined as “the state of being prepared or ready, readiness”. Further, Walinga (2008, pg. 316) refers readiness as
“prepared mentally and physically for an experience or action”. Preparedness or readiness is clearly defined in the Change Management literature. Similarly M&As are one type of organisational change. Hence for the research project I mean preparedness as to be prepared for M&A.

**Integration:** Integration is well defined in both the organisational change literature and in the M&A literature. Larsson and Finkelstein (1999, pg. 6) define Organisational Integration as a “degree of interaction and coordination between the two firms involved in a merger or acquisition”. Hence ‘Organisational Integration’ covers integration of Human Resources and Information Systems (IS) (see the definition below).

**Information System:** the term Information System (IS) is well defined in the IS literature. However, the problem at hand requests to define IS in terms of Enterprise Architecture (EA) concepts. Noran (2008) has customised the IS definition given by Bernus and Schmidt (1998) and Stohr and Konsynsky (as cited in Noran, 2008) to incorporate EA views into the definition of IS. Hence I have adopted Noran’s (2008, pg. 17) customised IS definition described as follows,

> “An information system is a subsystem of an enterprise used to collect, process, store, retrieve and distribute information within the enterprise and between the enterprise and its environment (Bernus and Schmidt, 1998), comprising ‘not only technologies but people, processes and organisational mechanisms’ (Stohr and Konsynsky as cited in Noran, 2008), ‘aimed at maintaining an integrated information flow throughout the enterprise’, providing the quality and quantity of information, ‘whenever and wherever needed’ (Bernus and Schmidt, 1998)”.

The above IS definition covers the IS functions and IS goals which are required in the EA view of the IS.

Our research focus is on post-merger integration planning during the pre-merger phase. Larsen (2005) and Mehta and Hirschheim (2007) argue that post-merger integration planning should be conducted during the pre-merger phase. However, Mehta and Hirschheim (2007) have found that the post-merger integration planning for ISs is often neglected during the pre-merger phase.

Post-Merger Integration covers enterprise wide integration efforts covering Business Integration, HR integration and IS integration. These integration efforts need to be co-ordinated with each other and should be addressed as a whole in order to achieve the aimed synergy, still, to some extent, existing research on M&A lacks such features of integration efforts (Cartwright & Schoenberg, 2006). Based on literature review of existing M&A research, the views of various research fields (Information Technology / Information Systems, Human Resources, Business) on M&A failure will have to be synthesized. Proposed here (in this dissertation) is a Preparedness Building model that is based on Enterprise Architecture – which, according to Bernus and Nemes (2003, pg. 3), is a discipline which incorporates all of the above disciplines and it guides the way to propose a solution model.
Larsen (2005) found (a perhaps unintuitive result) that in M&As the integration of IS (i.e. applications, programs and data) and of business processes are more crucial than the integration of products/services or the integration of business units. Enough research exists in the area of planning for IS and business process integration, but Mo and Nemes (2009) and DiGeorgio (2002) suggest that there is a lack of a “systems approach” to M&As. The author of this dissertation believes that a methodology or framework based on a systems approach could assist strategic management to create preparedness in the enterprise for M&As, and that this lack of methods is an important cause of major failures. Given the fact that there is a tension between a) the need for fast decision making when an M&A opportunity is identified and b) the need for thorough (and possibly time consuming) integration planning, preparedness building seems to be the only reasonable option.

For the above reasons, this research suggests a model that can support strategic management in making decisions and initiating action to build preparedness for possible future mergers and acquisitions, with the view of ensuring that the enterprise has the right technical qualities as well as systemic properties, such as resilience, flexibility, adaptability, interoperability, and requisite human skills, etc. In addition, the author felt it necessary to develop a model of the involved strategic management processes to support higher level management in planning the roadmap of a concrete merger or acquisition when the opportunity or need arises. Such processes involve the necessary activities that identify the need for a Merger or Acquisition and implement the business mission and vision during and after the M&A process. For both of the above goals, this research builds on a “systems view” of the enterprise provided by EA frameworks, such as GERAM (IFIP-IFAC Task Force, 1999) – the Generalised Enterprise Reference Architecture and Methodology Framework.

1.2 Research Aim

My research aim is to develop and suggest an example based meta-methodology model to support strategic management in building preparedness for M&As (such as ensuring that the enterprise has the right technical and system qualities mentioned above, i.e., resilience, flexibility, interoperability, human skills). The research project will develop a model that encompasses major activities and processes (to be identified from the literature review) for Post-merger integration planning and provides a systematic, example based, meta-methodology to cover key aspects which should be covered prior a merger, and even before what the literature calls a ‘pre-merger stage’.

This model is aimed to address two types of preparedness:

1. Preparedness for announced Merger or Acquisition, and
2. Preparedness for future, yet currently unknown, M&A opportunities or need.

This second preparedness is different from the first one, as in the second one the organisation aims to be agile and interoperable in its operations so as to enable future M&A opportunities. In contrast to this, the
first preparedness is pertaining to the planning for post-merger integration when the merger has already been decided. This research aims to synthesize the existing literature on M&As from various disciplines in order to build and propose a (meta-) methodology for preparedness building in M&A. Such methodology is expected to provide a new insight for researchers and practitioners when looking at current M&A failures.

1.3 Research Significance

The study of M&A preparedness is important because of the still prevalent high (~50%) failure rate (Alaranta and Heningsson, 2008, pg. 307; Rodriguez, 2008, pg. 65): this requires the attention of both researchers and practitioners (managers).

The causes found by researchers are associated with the Post-Merger Integration Planning of Business, IS and HR Integration and Post-Merger Integration Implementation (Mehta & Hirschhiem, 2007; Larsen, 2005; Mo & Nemes, 2009; Rodriguez, 2008; Schuler & Jackson, 2001), and, as Larsen (2005) and Mehta and Hirschheim (2007) argued, IS/IT integration is overlooked or neglected in the pre-merger stage which results in delayed post-merger integration.

Hence more research is required to find effective alternatives for pre-merger planning in order to improve the chances of successful post-merger integration implementation.

1.4 Expected Research Outcome

The research project is aimed to study M&A preparedness and especially concentrate on the pre-merger stage. Mo and Nemes (2009) and Larsen (2005) have suggested that Enterprise Architecture concepts can be helpful to address the complexity of M&As. For example, the “product-view” of the enterprise (i.e. the ‘enterprise as a product’) suggested by Bernus and Nemes (2003) can be applied to M&As to identify the aspects of change necessary for M&A preparedness. From this viewpoint, an M&A is not just an activity to integrate two or more separate firms / business units; rather successful M&A are relying on the enterprise having been designed to satisfy certain requirements (just like products), and this must be the result of a well thought out, planned, designed and implemented enterprise architecting process. Hence M&A could /should be addressed through EA discipline.

In order to better understand the complexity and dynamicity of M&As and how to prepare for them Mo and Nemes (2009) propose that a (suitably selected) enterprise model based on systematic design should be constructed. According to Fox and Gruninger (1998) an enterprise model is “a computational representation of the structure, activities, processes, information resources, people, behaviour, goals and constraints of a business, government or other enterprise”. They suggest that an enterprise model is needed for model driven organisational design. Therefore to support the vision of reducing high failure rate, this research focuses on the role of enterprise architecture (specifically enterprise modelling) in mergers and acquisitions. Consequently, I have planned my research to produce an example based meta-methodology model for M&A preparedness building.
I aim to identify and suggest the role of Enterprise Architecture (EA) in planning for overall Organisational Integration for Mergers and Acquisitions (M&A). The meaning of the term ‘role’ is that such model has a supportive role in building M&A preparedness. As mentioned earlier, EA and enterprise models are keys to model driven organisational design (Fox and Gruninger, 1998) because an enterprise model can be used to systematically plan and organize activities involved in M&A preparedness. The model is expected to help management identify, consider and plan for all transformational tasks necessary for the enterprise to be ready (‘prepared’) for strategically important M&As. We shall use an EA Framework that has the ability to represent the relevant questions.

As will be shown later, the Generalized Enterprise Reference Architecture and Methodology (GERAM) - Enterprise Architecture Framework (IFIP-IFAC Task Force, 1999) is a good candidate to find questions that need to be addressed for M&A’ preparedness and to suggest models to be built for considering M&A preparedness.
2.0 Literature Review

Literature review covers diverse studies conducted on M&A preparedness and post-merger (defined later) integration. This includes literature suggesting models and frameworks for different aspects of post-merger integration.

2.1 Literature Review

The M&A research area has developed since 1985 when attempts made to study drivers, motives and types of M&A – e.g. Napier (1985); more recently Walter (2004, pg. 62-77) has summarised major objectives of M&As as market extension, economies of scale, cost economies of scope, operating efficiencies and revenue economies of scope.

To this time where attempts continue to study the reasons for high failure rate – e.g. Mehta and Hirschheim (2007) --, as well as studies continue on how to improve M&A success rate – e.g. Mo and Nemes (2009).

Major M&A studies note the fact of M&As’ rise during several decades (Alaranta & Henningsson, 2008, pg. 307; Andrade, Mitchell & Stafford, 2001, pg. 104-105, Mehta & Hirschheim, 2007). The frequency of banking mergers were highlighted since 1990s (Andrade, Mitchell & Stafford, 2001, pg. 107; Rodriguez, 2008, pg. 63). With this increasing M&A rate, the majority of deals actually failed to achieve the aimed synergies and integration (Rodriguez, 2008, pg. 65). The precise failure rate varies according to industry though generally it is agreed to be more than 50% (Rodrigues, 2008; Mehta and Hirschheim, 2007; Atlaranta & Henningsson, 2008). Larsen (2005) in his study highlights the reality that comprehensive post-merger integration planning (especially the involvement of IS) is overlooked during the pre-merger planning stage. This directly points to the fact that something is missing in terms of M&A preparedness.

The major issues having the highest impact on M&A success are in the domain of IS/IT and organisational integration (Mehta and Hirschheim, 2007; Larsen, 2005; Rodriguez, 2008; Schuler and Jackson, 2001; Mo and Nemes, 2009). According to Mo and Nemes (2009) these issues are driven by the complexity of M&As. In addition, Cartwright and Schoenberg (2006) in their review of the last 30 years of M&A study note that the causes of issues include:

- executives are undertaking acquisitions driven by non-value maximizing motives
- the prescriptions from the academic research are not reaching the practitioner community
- the research to date is incomplete in some way
To study M&A preparedness we have considered the merger-process decomposition suggested by Mehta and Hirschheim (2007). They decompose the merger-process into three stages (called ‘phases’ by them): Pre-Merger Phase (strategic planning), Merger-day (deal closing) and Post-Merger Phase (Post-merger integration takes place). This decomposition is shown in the figure 2.

![Figure 2: Decomposition of Merger Process suggested by Mehta and Hirschheim (2007)](image)

[Note: what Mehta and Hirschheim call a ‘Phase’ is referred to as ‘Stage’ in this dissertation]

Our research focus is on the Strategic Planning (pre-merger) stage in order to better prepare for post-merger integration. Hence we want to look at the processes and activities of this stage to support the planning of M&A and in order to better prepare for post-merger integration. The objective of building preparedness is to reduce risk, cost and time of M&A.

Existing M&A literatures seem to be aimed at reducing high failure rate. In order to achieve this aim, researchers focus on various aspects of M&A and they have suggested various models and frameworks which are mentioned in further discussions.

2.1.1 What to consider for M&A Preparedness?

Studies of Stylianou, Jeffries & Robbins (1996), Baro, Chakrabarti and Deek (2008), Larsson and Finkelstein (1999), Hwang (2004), Rodriguez (2008) and Epstein (2004) highlight the factors that need to be considered when preparing for post-merger integration. The results of these studies can be synthesized to prepare a list of factors needed to be considered for M&A preparedness:

1. Management Issues/concerns
   a. Merger motive, expectations and planning (Stylianou, Jeffries & Robbins, 1996; McDonald, Coulthard, & Lange, 2005; Chatterjee, 2009)
   b. Coherent Integration Strategy (Epstein, 2004)
c. IS/IT Involvement in M&A planning (Stylianou, Jeffries & Robbins, 1996; Larson, 2005; Mehta & Hirschheim, 2007)

d. Organisational integration management (Stylianou, Jeffries & Robbins, 1996;)

2. IS Issues

a. IS Attributes (Stylianou, Jeffries & Robbins, 1996;)

b. IS Integration Management (Stylianou, Jeffries & Robbins, 1996;)

c. IS/ICT vision (Larsen, 2005)

d. Integration of Enterprise Systems/Applications such as ERP, SCM, CRM, etc., Level of data sharing, Technical compatibility (Hwang, 2004)

3. HRM Issues

a. Requirement of strong integration team, executive leadership (Epstien, 2004)

b. Need to consider not only HR issues but (individual) human side of M&A (Rodriguez, 2008, pg.67; Walsh, 1989)

c. Top-Down communication of vision, M&A strategies, and M&A planning (Rodriguez, 2008; Epstien, 2004)

d. Personnel Questions and concerns (benefits, retention or cut-offs) (Rodriguez, 2008; Walsh, 1989)

e. Lack of supporting programs such as advanced notification, extended benefits, outplacement activities (Rodriguez, 2008, pg. 66)

2.1.2 How to plan Post-Merger Integration?

The planning of post-merger integration is considered vital and still often neglected during the pre-merger phase (Larsen, 2005). He suggests a model to create an ICT vision for M&A. Through such model it is possible to consider ICT integration during pre-merger planning. To better plan post-merger integration Mehta and Hirschheim (2007) suggest an IS Integration decision making framework. This framework is based on the strategic alignment components suggested by Hirschheim and Sabherwal (as cited in Mehta and Hirschheim (2007)). An IS integration decision making framework can be helpful to guide decisions regarding Post-merger integration.

In addition, Wijnhoven, Spil, Stegwee and Fa (2006) suggest a model to list choices available for IT Integration methods based on Merger objectives and IT integration objectives. Based on Henderson and Venkataraman’s (1993) strategic alignment model, this model provides a complete set of options available for IT integration methods for various IT Integration objectives formed from a given merger objective. This model is helpful to select Integration methods in order to maintain the strategic alignment during M&A transformations.

To organise levels of integration, Vernadat (2007) suggests an interoperability categorisation framework. This framework categorises integration levels based on the inter-operability concept. According to
Vernadat (2007, pg. 139) firstly, if one enterprise aims to achieve Coordination with other enterprises then the required integration is at Business level. Secondly, if one enterprise wishes to have Co-operation with other enterprise, then the required integration is at Application level. Lastly if one enterprise aims for inter-operable Communication then they require Physical System level integration. This model can help to plan the combination of the expected level of inter-operability and the required level of integration.

Based on the above frameworks an operating model can be decided for the necessary business transformation during M&A. Ross, Weill and Robertson (2006) suggest that the level of data integration (i.e., sharing data across parts of the organisation) and the level of business process standardisation (i.e., use of uniform business processes across the organisation) decide an operating model for the organisation.

They (ibid, pg. 29 & 39) suggest a framework to demonstrate four operating models based on the level of business process integration and that of business process standardisation. Ross, Weill and Robertson (2006) argue that if the business process integration is high, the data must be integrated to leverage the integrated processes. These four operating models are summarised as follows,

1. Coordination
   - Business Process Integration – High
   - Business Process Standardisation - Low
2. Unification
   - Business Process Integration – High
   - Business Process Standardisation - High
3. Diversification
   - Business Process Integration – Low
   - Business Process Standardisation - Low
4. Replication
   - Business Process Integration – Low
   - Business Process Standardisation - High

The decided operating model can then identify the tasks for post-merger integration. However, in addition to business process standardisation and that of integration (including data integration), we need to consider information technology (IT) integration as well as organisational integration.

Bannert and Tschirky (2004) in their research suggest a model for integration planning for IT intensive M&As. Through this model, they highlight the fact that IT integration is slow and takes time as compared to other economic or financial integration. According to their explanation such technology integration should cover various components of Information Technology such as enterprise applications, platforms (including operating systems, communication, security, and database management systems).
According to Shrivastava (1986) overall organisational integration can be simply described as the integration of the involved organisations into a single organisation. He suggests that organisational integration should be achieved on multiple levels:

- procedural integration (integration of systems and procedures),
- legal and accounting integration,
- functional integration (integration of functional units),
- strategic business unit integration (integration of acquired firm’s board into strategic planning),
- physical integration (integration of resources and assets),
- product line integration,
- integration of production technologies and
- managerial and socio-cultural integration (integration of corporate cultures).

These various levels of integration can be systematically organised in order to prioritise the integration tasks for each level of integration.

*Therefore based on the choices made for business data integration, business process standardisation, technology integration and organisational integration, an operating model can be decided. This model can then guide further M&A implementation.*

### 2.1.3 How to implement Post-Merger Integration?

Based on the planning carried out for post-merger integration, various models exist to guide post-merger integration implementation.

Giacomazzi, Panella, Pernici and Sansoi (1997) suggest a model of post-merger IS integration and provide a list of options available (Total Integration, Partial Integration, No Integration and Transition) for a given computer architecture and software architecture. In addition, they provide a descriptive model in order to explain how to implement each of the IS integration options. This model is helpful to explain and implement Post-merger IS integration.

Schuler and Jackson (2001) focus on HR integration and suggest a three stage HR integration model (pre-combination, combination and solidification). In this model, Schuler and Jackson (2001) cover major HR activities, strategies and planning for successful post-merger integration. They provide solutions to key HR concerns such as cut-offs, retentions, promotions and communication during M&A transformations.

Mische (2002, pg. 705) suggest a five-phase systems integration life-cycle based on the Software development life-cycle (SDLC). The focus of Mische (2002) is on technical system integration. This life-
cycle model is able to explain systems integration in M&A. Five ‘phases’ of the lifecycle are defined by Mische as follows:

1. Establish the integration environment
2. Assess integration requirements and applications design
3. Assess data requirements and design integrated data warehouses
4. Develop and prototype integrated systems
5. Implement integrated systems

Mische (2002) lists activities and work products of each of these five phases. These activities can be mapped on GERA’s (1999) lifecycle stages in order to ensure that all necessary M&A preparedness activities are covered. This lifecycle can be integrated into the model for preparedness, further it can be tested to see whether the Systems integration lifecycle can be applied to organisational integration or not.

A work stream model (nine interdependent and continuing sets of responsibilities) for M&A integration is suggested by Galpin and Herndon (2007). Through this work stream model Galpin and Herndon (2007) emphasise major sets of responsibilities of every aspect of the organisation. These nine sets can be summarized as follows,

1. Executive leadership roles and responsibilities
2. Business integration
3. Communication
4. Structure and staffing
5. Recruiting
6. Cultural integration
7. Human capital-related integration
8. Measurement and feedback
9. Integration planning and project management

Galpin and Herndon (2007) argue that these nine work streams covers major aspects related to post-merger integration planning and implementation. This work stream model can be used along with the above M&A post-merger integration models to guide the steps of post-merger integration.

Mo and Nemes (2009) suggest a novel idea to approach integration. They suggest a ‘DNA’ (biological DNA) EA (Enterprise Architecture) concept. This concept is helpful to explain the relationship between the DNA of the resulting organisation and the DNAs of the involved organisations from which properties are inherited. Using this ‘DNA EA’ concept, they explain post-merger integration as the inheritance of DNAs (process, knowledge, control, data, people and asset) of the organisations into the DNAs of the merged
organisation. Mo and Nemes (2009) provide an explanation of how to implement post-merger integration by treating six DNA components separately.

In summary, existing literature focusing on pre-merger planning can be decomposed into three components:

- what to consider for-
- how to plan- and
- how to implement-

- Post-merger integration. For better preparedness of M&A one should consider these three aspects and a thorough planning is needed during the pre-merger phase. In addition the literature and existing models can be synthesized through a GERAM based model. This review provides an overview of existing studies conducted on post-merger integration. However, some researchers have noted that there is a lack in theory and practice which is explained in the next section.

2.2 Gaps in Theory and Practice

Studies reviewed above point at the existing gap in theory and practice. Mo and Nemes (2009), Larsen (2005), Mehta and Hirschheim (2007), Rodriguez (2008) and Cartwright and Schoenberg (2006) argue that delays in Post-Merger integration and avoidance of Pre-Merger planning for post-merger integration result into M&A failures. Hence Mo and Nemes (2009), Mehta and Hirschheim (2007) and Larsen (2005) argue that a focus on pre-merger planning for post-merger IS integration is needed. Larsen (2005) specifically advocates that, for effective post-merger integration planning during pre-merger phase it is necessary to involve IS experts not only business experts. Similarly Rodriguez (2008) argues for the HR involvement during pre-merger planning. Hence we have concluded that there is a lack of IS and HR involvement during pre-merger planning. Therefore a model based on Enterprise Architecture concepts (covers IS, HR and Business perspectives) for preparedness is lacking in theory. Such model can be derived from existing literature (as discussed above). By synthesizing the three components of literature review a model can be suggested to provide a complete picture of involved M&A preparedness activities. Further the gap observed can be summarized as follows.

Gap in Theory:

- Lack of agile, flexible, quick-responsive framework suitable to M&A’ complexity (Mo & Nemes, 2009)
- Lack of Systems approach (Mo & Nemes, 2009, pg. 4; Larsen, 2005; DiGeorgio, 2007)
- Required multi-disciplinary approach (Cartwright & Schoenberg, 2006, pg. 5)
- Lack of focus on the pre-merger stage (Rodriguez, 2008, pg. 65)
- Lack of IS/IT integration planning in Pre-merger planning (Larsen, 2005; Mehta and Hirschheim, 2007)
Gap in Practice:
- Lack of focus on Integration Planning in pre-merger phase (Mehta & Hirschheim, 2007; Larsen, 2005)
- “The prescriptions from the academic research are not reaching the practitioner community” (Cartwright & Schoenberg, 2006, pg. 5)

In addition to above highlighted gap in theory and practice, a key contradiction should be noted. Mehta and Hirschheim (2007) have suggested a decomposition of M&A process as shown in figure 2. Other researchers (e.g. Larsen, 2005) agree on this decomposition and assume that as a basis for their research. In this figure 2, Mehta and Hirschheim (2007) have decomposed the M&A process in three phases, pre-merger phase, merger day and post-merger phase. Researchers argue for involvement of HR and IT during pre-merger phase. In contrast, there is constraint on time during pre-merger phase. According to Lucks (2003, pg. 12-14) from practitioners’ point of view that suggestion (i.e. involvement of HR and IT during pre-merger phase) is not feasible or possible. Consequently studies (Larsen 2005; Mehta and Hirschheim, 2007; Rodriguez, 2008) were conducted to highlight the fact that HR and IT are neglected which causes the failure of M&A. Hence researchers found that:

1. Involvement of HR and IS for post-merger integration planning is vital and necessary
2. HR and IS post-merger integration planning should be completed before the deal is signed
3. Post-merger integration should be quick.

A real concern highlighted here is the contradiction between suggestions from researchers and practitioners’ view. Hence we suggest a way to answer this contradiction through following M&A process decomposition (Figure 3) as compared to Mehta and Hirschheim’s (2007) M&A process decomposition (Figure 2).
Both the theory and practice lack in addressing the stage in an enterprise’s life before M&A opportunities even arise, i.e. the stage where preparedness can (or could) be built. We propose the timeline (stages) of the M&A process as shown in figure 3, and observe that preparedness can be built even before the M&A opportunity arises. Work performed in this ‘preparedness building’ stage allows business people to involve experts from HR and IS in deciding (and acting upon) the establishment of preparedness for M&A – well before the pre-merger stage. The outcome of this preparedness building stage is that,

a) When a merger or acquisition is considered, higher level management will be in a better position to make informed decisions about the feasibility, time, cost and risk of post-merger integration.

b) If the strategic objectives of preparedness building are well selected, a range of otherwise out of reach (too risky, too expensive, too lengthy, infeasible, etc.) M&A opportunities will become available.

A side-effect of the above is that it can shorten the time required for pre-merger deliberations stage (which includes integration planning).

Hence, existing literature confirms that there is lack of IS and HR integration focus during pre-merger stage. This leads to major delays in post-merger integration and ultimately results in a high failure rate. An answer to that can be a preparedness model based on Generalised Enterprise Reference Architecture (GERAM) Framework and Methodology which can,

- use a multi-disciplinary approach (IS, HR and Business – an answer to Cartwright and Schoenberg (2006)),
- support post-merger integration focus in pre-merger stage (an answer to Mehta & Hirschheim (2007); Larsen (2005); Mo & Nemes (2009) and Schuler & Jackson (2001)), and
• Support preparedness building for M&A.

Such a model could be the basis of a new interpretation of the conclusions of M&A literature, as well as of a new way to reduce failure rate in M&A.

2.3 The Research question

The main research question is - How can Enterprise Architecture practice support higher management in building preparedness for banking industry’s M&A?

This question can be decomposed into the following sub-questions:

• What questions should be asked in order to determine the type (and level) of preparedness to be built (e.g. questions exploring what needs to be integrated, how, why, when and at what level)?
• For each type of preparedness, what actions need to be taken to achieve it?
• Finally, once strategic decision has been taken on the type of preparedness desired how to organize an M&A preparedness program and project(s)?
3.0 Research Framework

The research question is focussed on building preparedness for M&A. The form of the answer is expected to be a methodology (or meta-methodology) [as appropriate] which considers how the enterprise needs to be architected / engineered so as to have the systemic properties that are conducive to the changes required in M&A.

Based on the research focus and research question, a positivist research approach is adopted (discussed in detail in section: 4). The positivist research approach calls for a framework that can address change as a systematic enterprise engineering / architecting effort.

3.1 Selection of Research Framework

Mo and Nemes (2009) suggest that a methodology based on strong engineering discipline is needed to systematically plan M&A activities and to perform a well-organized transition during M&A.

Bernus and Nemes (2003) Frameworks that systematise all aspects of change in the enterprise are called ‘Enterprise Architecture frameworks’. They suggest that Enterprise architecture has the ability to support decision making in changing businesses, because EA brings together business models (e.g. process models, organisational charts, etc.) and technical models (e.g. systems architectures, data models, state diagrams, etc.). In addition to the systems properties, the EA Framework to be selected needs to be able to describe (with equal weight) the concerns of M&A as expressed in literature, specifically

- Human and IS aspects,
- Process and Technology oriented aspects.

The above aspects are identified as required for considering complex M&A activities by Cartwright & Schoenberg (2006). According to Mo and Nemes (2009) enterprise architecture frameworks address these specific aspects of the problem.

Examples of such frameworks include (Bernus, Nemes & Williams, 1996):

- PERA [Purdue Enterprise Reference Architecture] (Williams, 1994) – demonstrate a methodology to design an enterprise through its life-cycle;
- CIMOSA [Computer Integrated Manufacturing Open Systems Architecture] (AMICE (1993)) helps identify the specification, design and implementation activities of an enterprise and, importantly, defines the meaning of reusable reference models;
- GRAI GIM (Chen, Vallespir & Doumeingts, 1997) describes a methodology and reference model of how different components of an enterprise (its service and management components) are connected to each other and are developed in the enterprise’s life-cycle.
The generalization of architecture frameworks which have the above mentioned properties is known as GERAM, the basis of the International Standard for EA frameworks (ISO 15704:2000, 2005).

It is to be noted that other architecture frameworks, namely those which originate from the IS field, concentrate on the Information Technology component only (such as The Open Group Architecture Framework (TOGAF), (2009) or Zachman Framework (Zachman, 1987)), although their mapping to GERAM is available (Noran, 2003; Saha (n.d.))

Thus, based on the research question and the observation of existing M&A literature, we intend to find a way to incorporate EA practice into M&A through ISO 15704 and the GERAM Enterprise Architecture Framework – (NB. historically GERAM stands for ‘Generalised Enterprise Reference Architecture and Methodology’).

The IFIP-IFAC Task Force (1999, pg. 4) describes the framework as: “GERAM is about those methods, models and tools which are needed to build and maintain the integrated enterprise, be it a part of an enterprise, a single enterprise or a network of enterprises (virtual enterprise or extended enterprise)”. They suggest that GERAM aims to synthesize and organize all existing enterprise integration knowledge.

In the following discussion we briefly review the components of GERAM, i.e. the fundamental concepts of the framework, which can be used to characterise the problem in a formal manner and be used in devising a solution.

3.2 Components of the selected framework

The research framework has different components to incorporate various views and viewpoints of enterprise modelling. These components are discussed in further discussion.

3.2.1 Entity Types

GERAM defines the concept of ‘Enterprise Entity’ (or enterprise entity type) which falls into one of the following categories: (a) Operation Oriented Entity Types and (b) Recursive Enterprise Entity Types.

According to the IFIP-IFAC Task Force (1999) Operation Oriented Entity Types are concerned with different types of Enterprise Operations. Examples given are: Project Entity, Repetitive Service Entity, such as a Manufacturing Enterprise and Product Entity.

The task force defines an entity type as Project Entity which is created for the one-off production of another entity. Generally, Project Enterprise Entity have short life history. The product of this entity type can be an enterprise, a product or a service to another entity. Repetitive Service Entity defines enterprises that support a type or family of products. The product of this type can be non-enterprise products (i.e. Type C) or enterprise products (i.e. enterprise themselves). Finally Product entity type defines a large class of entities covering any artificial products (i.e. customer goods or services).
IFIP-IFAC Task Force (1999) provides examples of the Recursive Enterprise Entity Types as: Strategic Enterprise Management Entity, Enterprise Engineering/Integration Entity, Enterprise Entity, Product Entity and Methodology Entity. Strategic Enterprise Management Entity Type defines the need or starting of any enterprise wide change effort. Enterprise Engineering/Integration Entity Type provides the means to the enterprise engineering effort defined by Strategic Enterprise Management Entity type. Enterprise Engineering / Integration Entity Type often use the enterprise methodology entity type in order to deploy other enterprise entities aimed to perform required enterprise operations. Enterprise Entity Type is basically the product of Enterprise Engineering / Integration Entity Type’s operation. It uses methodology and an operational system provided by Enterprise Engineering / Integration Entity Type in order to build non enterprise products (customer goods and/or services). Product Entity Type is the product of Enterprise Entity Type operation. Generally Product Entity Type represents all the products and services of an enterprise. Potentially the operation of these 4 entity types aided with the Methodology Entity Type. Methodology Entity Type represents methodologies to be employed by any enterprise entity type to guide its operations in order to build another entity type. GERAM defines these diverse concepts of entity types to separate each entity according to its purpose and aim. These sets of entity types cover wide range of enterprise entities; any enterprise entity can be matched with one of the set of entity type and vice versa.

### 3.2.2 Generalized Enterprise Reference Architecture (GERA)

GERA includes a number of concepts: Modelling framework, life-cycle, life history, life-cycle recursion.

Figure 4 shows the Modelling Framework GERA and its three dimensions: Instantiation, Life-cycle phases and Views (recently renamed to ‘Viewpoints’).
3.2.2.1 Instantiation Dimension
Firstly, IFIP-IFAC Task Force (1999) suggests that the Instantiation Dimension provides a controlled transition from generic through partial, to particular models of the enterprise entity. As mentioned earlier, GERAM serves as a reference architecture based on which one can customize user specific (i.e. industry specific and/or requirement specific) models. Generic and Partial models provide the reference part; they cover definitions of concepts, basic and macro level constructs of the given field. Particular models in turn are the result of modeling process. Hence if one starts modeling of automotive industry, one can customize / reuse the generic and partial models common in the automotive industry rather than starting from scratch. This helps to limit the time required for modeling and helps us follow industry specific standards.

3.2.2.2 Life-cycle Phases Dimension
Secondly, IFIP-IFAC Task Force (1999) lists the Life-cycle phases of GERA framework for any enterprise entity type as (in order) - Identification, Concept, Requirements, Design (Preliminary and Detailed), Implementation, Operation and Decommission. These life-cycle phases of any given enterprise entity
type defines various types of activities associated with the life of that entity starting from identification of an entity to decommission (i.e. end of life) of an entity. In the figure 4, the operation phase of reference and partial architecture of a given entity is absent; that is due to the fact that operation will be considered for the particular (i.e. real or in practice) model of an entity not that of the reference or partial model. A life-cycle diagram can be built showing the connections between different life-cycle phases of different enterprise entities. Such diagram (with detail description of each connection) can then be considered as a model of enterprise engineering methodology.

3.2.2.3 Views Dimension
Finally, in order to explain the Views dimension we refer to Figure 5 - detailed version of Figure 4. Figure 5 represents the GERA modelling framework with presented modelling viewpoints of GERAM. According to IFIP-IFAC Task Force (1999, pg.19) the Views dimension of GERA can be discussed through four different types of views: Entity Model Content Views, Entity Purpose Views, Entity Implementation Views and Entity Physical Manifestation Views. The following discussion explains these four types of views.

![Figure 5: GERA Modelling Framework with Modelling Views](Source: IFIP-IFAC Task Force (1999, pg. 22))
Firstly, in Entity Model Content Views the IFIP-IFAC Task Force (1999) has defined four different model content views (i.e. Function, Information, Organisation and Resource) for the user oriented process representation. Function view cover functionalities (i.e. activities) and behaviours (i.e. flow of control). Information view collects knowledge about objects of the enterprise as they produced through enterprise operations. Resource View covers human, technical and/or technological resources. Organisation view incorporates responsibilities and authorities on the given entity. Entity model content views cover diverse information for a given entity. Entity Model Content Views can be demonstrated across all the GERA life-cycle phases excepting Entity Identification phase.

Secondly, IFIP-IFAC Task Force (1999) decomposes the Entity Purpose Views into Customer Service and Product View and Management Control view. The subdivision of Entity Purpose Views helps to model enterprise operations of both mission fulfilment part and management part. Similar to Entity Model Content Views, Entity Purpose Views can be modelled across last seven GERA life-cycle phases leaving the first one (i.e. Entity Identification phase).

Thirdly, according to IFIP-IFAC Task Force (1999) Entity Implementation View divided into Human Activities view and Automated Activities view. Human Activities view helps to model all the information about tasks which will be completed by humans. On the contrary, Automated Activities view represents all the activities that will be completed by machines. These automated activities view can be again decomposed into mission support technology (i.e. for customer service and product view) and management and control technology (i.e. for management and control view). Entity Implementation views sometimes divided into human and non-human activities in order to broader the use of the term “automated activities”. Entity Implementation views can be represented through bottom four GERA life-cycle phases (i.e. Preliminary Design, Detailed Design, Implementation, Operation and Decommission).

Finally, IFIP-IFAC Task Force (1999) defines Entity Physical Manifestation Views through Software and Hardware view. Software view helps to model all the information resources that support and/or control that enterprise entity’s operations. Similarly, Hardware view represents all the physical resources with specified capability to perform the enterprise operations. Entity Physical Manifestation views spans across last four GERA life-cycle phases (i.e. Detailed Design, Implementation, Operation and Decommission).

3.2.2.4 Life history

“The life history of a business entity is the representation in time of tasks carried out on the particular entity during its entire life span” (the IFIP-IFAC Task Force, 1999, pg. 12). The Life History of given entity can represent all the activities pertaining to that entity during its life-cycle phases. Through the concept of Life History, one can demonstrate various activity types associated with different life-cycle phases. The concept of life history enables the representation of connections/links between entity’s life-cycle phases with that of other entities. In a sense by building the life history diagrams of all involved entities in an
organisational change effort, one can describe all required organisational processes and operations required to carry out that organisational change. Interestingly such life history diagrams can help to anticipate and systematize the operational structures of processes; for example, identification of all involved processes, prioritization of those processes, identification of sequence of processes, identification of parallel processes, etc. I adopted this life history concept into this research in order to demonstrate a (meta-) methodology to establish preparedness for M&A.

3.2.2.5 Life-cycle recursion
Life-cycle Recursion concept is associated with Recursive Set of Enterprise Entity Types mentioned in Section 3.1. The IFIP-IFAC Task Force defines the concept of Life-cycle recursion through the roles of four entity types namely Strategic Enterprise Management Entity, Enterprise Engineering/Integration Entity, Enterprise Entity, Product Entity; their respective products and the relations between them.

The entity recursion concept is shown in figure 6 below. The strategic enterprise management entity starts the creation of any other lower entity type by defining the goal, scope and objectives of that lower level entity type. In turn, Enterprise Engineering/Integration Entity performs the development and implementation tasks of that particular entity. On completion of creation and design of an entity, enterprise entity itself produces the enterprise product (Product Entity Type) which can be a consumer product or a service (to customer or to enterprise).
This life-cycle of a manufacturing enterprise is shown in figure 6. In figure the manufacturing entity is explored to show the particular relations between its life-cycle phases with other entity types. However other entity types have their own life-cycle phases and during the operation life-cycle phase, they perform the creation, development, design or implementation operations of manufacturing entity. Typically, the strategic enterprise management entity can be located in head quarter while the enterprise entity can be the manufacturing plant itself.

This life-cycle recursion concept is helpful for the research focus as I am focusing on the M&A preparedness building which is considered as an organisational change effort. This change effort involves number of other project entity types with strategic enterprise management entity type and enterprise entity types. Hence life-cycle recursion concept can help to demonstrate the relationship between involved entity types.
3.3 Suitability of the Research Framework

M&A are considered as an organisational change effort (Stylianou, Jeffries & Robbins, 1996; Epstein, 2004). Such organisational change effort requires systematic structure to carry out the required processes and activities particularly Post-merger integration. Hence, as discussed above, the GERAM - research framework can help to structure and plan the activities required to perform such organisational change. Further discussion elaborates the suitability (including the scope) of GERAM with the research focus.

According to IFIP-IFAC Task Force (1999, pg. 4) GERAM’s scope covers major enterprise engineering and enterprise integration efforts. Further the task force highlights the fact that merger is a part of those enterprise engineering/integration efforts. Hence, the GERAM framework could be applied to systematize M&A activities, and as part of this effort develop a preparedness building model for M&As.

Such a model should demonstrate how an Enterprise Architecture based (meta-) methodology can be used to create a plan for building M&A preparedness. Furthermore, the model should also demonstrate how to execute this plan in anticipation of possible future business development options, rather than starting to plan at the time when a concrete M&A option arises (as is usually the case today).

In section 2.2, the common argument from various researchers was highlighted, namely that in order to decrease the high failure rate and to better address M&A complexity, a systems approach is required. In addition to this Bannert and Tschirky (2004, pg.483) have found that the lack of a systematic integration processes is one of the key problems during M&A. Hence these arguments suggest that the proposed solution should be based on a systems approach. As a solution, Mo and Nemes (2009) suggested that an Enterprise Architecture approach and GERAM provide a structured system to manage complex M&A activities. In addition, Mo and Nemes (2009) have used GERAM as their research framework and suggested it as a basis for a possible solution to M&A post-merger integration implementation. Similarly, the IFIP-IFAC Task Force (1999) suggests that GERAM is based on systems engineering approach; hence using GERAM as a research framework we can reasonably expect to be able to incorporate a systems approach into our solution model.

Cartwright and Schoneberg (2006) in their review of last 30 years of M&A literature conclude that one possible way to decrease the high failure rate is to consider using a multi-disciplinary approach. Similarly, as discussed in the literature review, and in Section 2.2, both HR and IT systems should be considered during preparedness building. As a response, the EA discipline provides a way to combine all three disciplines: Business and Management, HR and IT. According to the IFIP-IFAC Task Force (1999, pg. 4) GERAM is a unification of several aspects: GERAM includes Human, Process and Technology oriented concepts. Hence through GERAM we can use a multi-disciplinary approach as suggested by the literature.
Mo and Nemes (2009) in their research propose five fundamental characteristics for Enterprise Architecture in M&A as mentioned below,

1. Understanding the cost of the merging of production, information systems and human organisations;
2. Modelling risks in all areas;
3. Modelling the time necessary for the merger, identifying optimum, best and worst case scenarios;
4. Maximising the reuse of best practices and resources in all areas;
5. Understanding the difficulties and bottlenecks in all areas.

These five fundamental characteristics can be satisfied with the preparedness building model. The detailed explanation of how these characteristics are met is explained in the Section 5 (M&A Preparedness Building Program).

Finally, the motivation of choosing the GERAM framework is its fundamental concepts (such as Entity Types, Views Dimension, Life-cycle Phases, Life History and Life-cycle Recursion - as explained in Sections 3.1 and 3.2) which enable us to demonstrate a methodology in order to create a preparedness building model for M&A. Further, Noran (2003) suggests that GERAM is the only framework which supports the concepts of Life history and life-cycle recursion. These concepts can help us meet characteristics 3 & 4 suggested by Mo and Nemes (2009). Through the life history model (which is a special set of interrelated of Gantt charts) one can demonstrate the relative timing of all involved processes and their sequences. At the same time, the concept of life-cycle recursion can help us demonstrate the reuse of common and best practices (e.g. how to use a set of uniform / harmonized business, technology, etc. principles across multiple entities in the enterprise). Hence the GERAM framework will be used to model the involved processes in M&A preparedness building.
4.0 Research Methodology

According to Leedy (2010, pg. 5) in a research “we attempt to find systematically, and with the support of demonstrable facts, the answer to a question or the resolution of a problem”. I have planned my research based on a general research process suggested by Walliman (2005, pg. 26) and McMurray Pace and Scott (2004, pg. 42). The customised research process (in form of a flow chart diagram) is shown in Figure 7 below. In the figure, each box shows a step in the research process; a triangle shows the outcome of a step; arrows show the flow of the research process, and dashed lines represent internal loops, whereupon dashed-dotted lines show the connection of a step to its outcome.

As shown in Figure 7 and as mentioned by Walliman (2005), the first step of the research process is the identification of a problem which requires an answer or a resolution. During this step researchers identify the context of the problem and perform feasibility study (i.e. is it doable? What will be the significance of this research? What research exists in the area? How research is usually conducted in this area? What are available research methods?). At the end of this step the researcher has a formal idea about the
context of the problem and informal ideas about the aim, the expected outcome and significance of the research. These components of this research were described in Section 1.

The next step is to perform a literature review. Hart (1998, pg.26) suggests that performing a literature review is considered as the researcher(s)’s responsibility to find out what already has been done in the research area before doing the research itself. According to McMurray et.al (2004) the literature review can be decomposed into two phases: searching and reviewing; they highlight (ibid. 2004, pg. 48) that the purpose of literature reviews is to increase the researcher’s knowledge of the problem and to illustrate the gaps in the existing bodies of knowledge and theory. Accordingly, the literature review was conducted in Section 2, resulting a formal understanding of the problem area and that of gaps in theory and practice. Furthermore some previous findings were collected that appeared to need further analysis. This step has led to the formation of the initial research question as discussed below.

The third step is to form the research question. According to Leedy (1993) “the problem is the axial centre around which the whole research effort turns”. Based on the breadth and depth of the literature review the researcher is able to formally derive the research question(s). At the end of the literature review, in Section 2.3, the initial research question was formed. (Later the initial research question is restated in a formal way so that the final revised question and the selected research methodology (as discussed below) are the outcome (i.e. (triangle) # 4) of Step 6)

The initial research question led, in step four, to the selection of a research framework, which is to be selected according to the nature of the problem and the researcher’s focus (the desired type of outcome). In this case, the expected outcome of the research is a demonstration with an example of how EA practice can support the M&A preparedness building. The nature of the problem being enterprise transformation suggested the use of an EA framework to guide the research. The outcome of step four is that a research framework is selected (with its justification and utilities which were discussed in Section 3.)

The fifth step is to select theoretical grounds (referred to as research strategy by Jarvinen (2004)) of the research project. According to Jarvinen (2004) this step includes the selection of a research approach, research method and theory derivation approach; Section 4 is organised to clarify the selections of theoretical ground.

This step enables us to summarise the theoretical viewpoint based on which the research is conducted. The outcome of this step will guide the further research steps (i.e. development of an example based meta-methodology model). At the end of this step the research question will be revised to restate it in a formal manner. Hence the final outcomes of step 5 are the finalised research question and the selected research methodology.
Based on the above steps an example based methodology will be developed (in Section 5) to demonstrate the use of EA in M&A preparedness building. This second last step requires significant amount of time, energy and intellectual input. At the end of this step an example based meta-methodology will be prepared which then will be revised and edited (shown as dotted line from step seven through to literature review, representing model refinement and revision). The final expected outcome will be able to answer the research question and to address the research aim. This expected outcome is shown as triangle 5 in Figure 7.

Finally, the last step is to confirm the status, reliability, validity and rigor of the outcome. During this step the conclusion on the research will be made with some suggestions for further study. This step is discussed in Section 6.

Further discussion illustrates the selection of each of the research strategy components.

4.1 Research Method
Jarvinen (2004, pg. 3) states that “the problem dominates the method selection, not vice versa”. Jarvinen’s (2004) advice is reflected in the discussion below, with reference to the research problem (Section 1.0) and the research question (Section 2.3 The Research question).

4.1.1 Research Method
To find the appropriate research method I have followed Jarvinen (2004)’s classification of research approaches. Jarvinen (2004)’s classification of research approaches is shown in figure 8. He classifies all research approaches into: (1) Approaches studying reality and (2) Mathematical approaches. Mathematical approaches are aimed to study a certain theorem, lemma or assertion to prove them true. Approaches studying reality is further decomposed on the basis of reality (i.e. Approaches stressing what is reality) and innovations (i.e. Approaches stressing the utility of innovations). The approaches stressing what is reality can be further decomposed into Conceptual-Analytical approaches and Approaches for empirical studies (which can be decomposed into Theory testing approaches and Theory creating approaches). In contrast, Approaches stressing the utility of innovations can be decomposed into innovation building approaches and innovation evaluating approaches. Figure 8 shows Jarvinen’s taxonomy of research methods.
Based on the EA view (provided by the research framework) the reality of preparedness building and post-merger integration is different than what can be seen from individual Business, HR or IS view. In detail in M&A research, IS researchers have found issues related to post-merger IS integration, HR researchers have found issues related to post-merger HR integration and the similar is true for business researchers. However in order to achieve overall post-merger integration, each of those post-merger integration views should interact and coordinate with each other because the post-merger integration choice made for one organisational aspect can impact the integration of other aspects. Therefore we can conclude that this research stresses on what is reality according to the EA view provided by the research framework. According to Jarvinen (2004) two research approaches are applicable in this case: Conceptual Analytical Approaches and Approaches for empirical studies. Further significant research exists in the M&A area to highlight potential issues and management concerns during M&A. However, the gap observed in theory and practice (section 2.2) requests an attention of EA theory and practice to the M&A. Therefore the research aims to demonstrate through an example that how M&A preparedness can be built using EA concepts and the research framework. Hence Conceptual analytical research method suits the research problem and research aim.
Initially, Design Science Research method was thought as another applicable research method because the development of an EA methodology can be an innovation building effort. According to Jarvinen’s (2004) differentiation the Design Science research method is helpful to validate a model (after development of it) by external professionals while Conceptual Analytical research method is helpful to synthesize and compare the constructs of the literature to develop a model itself. Conceptual Analytical research method is selected as,

- the research focus is on the nature of concepts and how to analyse them
- the research is aimed to synthesize the literature and propose a model based on facts from literature.
- the research aim is to develop an example based meta-methodology (demonstration through a concrete model), and not to develop and evaluate a generic methodology (as reflected in the research question – “how to incorporate EA practice …“)
- The research stress is on the “how to” rather than the validation part of the model outcome.
- The expected outcome will be an extension of the demonstration of the research framework’s applicability to M&A preparedness building (as research already exists on the framework’s application to other research problems such as Noran (2008), Molina & Carrasco (2003), Tolle, Bernus & Vesterager (2002))

Jarvinen (2004, pg. 17) suggests that the conceptual analytical research method is aimed to study “what is a part of reality according to a certain theory, model or framework?” Hence according to Jarvinen (2004) the outcome of the selected research method can be a theory, model or framework derived either in deductive way or inductive way (i.e. theory derivation approaches, explained in section 4.3). The derived theory, model or framework can be descriptive (emphasise on ‘how’) or normative (emphasise on the ‘utility’) (Jarvinen, 2004). Conceptual Analytical Research method concentrates on descriptive theory derivation. Hence the expected research outcome will be a descriptive example based meta-methodology model for M&A preparedness building. Such model will demonstrate through an example how to use EA concepts and the research framework to establish M&A preparedness.

4.1.2 Research Outcome and Theory Building Process

As mentioned above, the research outcome of this Conceptual Analytical research can be a theory, framework or model. For this research, the outcome will be an example based meta-methodology which should be classified as one of the three mentioned outcomes. Following discussion explains what will be the expected outcome and the method adopted to derive the expected outcome.

The expected outcome is assumed to be a theory not a framework or a model. Following arguments verifies this assumption. Researchers (Weber, 2003; Sutton and Staw, 1995; Jarvinen, 2004) have noted that not a single definition of ‘theory’ is agreed upon. According to Sutton and Staw (1995) there is more
common agreement on what is not a theory rather than theory's constituents. They (ibid) suggest that references, data, variables, diagrams and hypotheses are not theory. Though there is not a commonly agreed definition of theory, we can refer to Weber’s (2003) explanation of theory which suits this research. Weber (2003, pg. iv) explains the theory as “an account that is intended to explain or predict some phenomena that we perceive in the world”. Here in this research, we are focusing on the M&A and Post-merger integration issues hence those issues can be phenomena for our research. In turn, the expected outcome will be an example based meta-methodology which will demonstrate a way to incorporate EA practice to solve major issues of the phenomena of the research. Therefore the expected outcome can be the account of the phenomena for this research. Hence based on this reasoning, we can conclude that the expected outcome can be considered as a theory for M&A preparedness building.

Based on the above discussion we can conclude that this research is a theory building exercise, hence it is necessary to mention the theory building process used in this research. Jarvinen (2004) recommends the theory building process as suggested by Weber (2003). In his explanation, Weber (2003) describes the theory building as an art which requires creative insights. Weber (2003) mentions that the theory building process is procedural, but the steps of the process are iterative. The major steps of Weber (2003)'s theory building are shown the figure given below.
The above four steps of Weber’s (2003) theory building process will be discussed in more detail in Section 5 to demonstrate the process’ application to this research.

Then the research aim and focus require a research method to support theory building, based on existing research, using inductive theory derivation approach (explained in section 4.3) and logical reasoning (here about M&A issues in terms of the research framework). Therefore, the Conceptual Analytical research method is selected for the research.

4.1.3 Example of a Conceptual Analytical Research

An example of a research based on the selected research method can be discussed through the research of Mo and Nemes (2009). Though not clearly stated Mo and Nemes (2009) have used Conceptual Analytical research method. Their research aimed to propose an EA based concept (based on GERAM) to model post-merger integration implementation. They have proposed a DNA (biological term) EA (Enterprise Architecture) concept using conceptual analytical research method. In their research, in addition to M&A literature, they have synthesized existing literatures which use DNA terminology for Enterprise Systems and Enterprise Architecture. Based on the literatures they have reviewed, they have developed and proposed a DNA EA modelling concept for M&As. Similarly, the aim of this research is to review existing work on M&A and post-merger integration planning in order to develop an example based
meta-methodology for M&A preparedness building. Based on the literature review we can prepare a list of issues need to be considered for M&A; and the selected research framework can help us developing models required for example based meta-methodology to demonstrate,

- The inclusion of all major issues identified
- The use of EA practice in M&A preparedness building
- A Step-by-step meta-methodology to plan and implement the transformational efforts required for M&A preparedness building

Hence the research of Mo and Nemes (2009) is used as a reference which guides the way to develop the example based methodology using the selected research framework and the Conceptual Analytical research method.

4.1.4 Systems Approach

In addition to Mo and Nemes (2009), Bannert and Tschirky (2004), DiGeorgio (2002) and Larsen (2005) highlight the requirement of Systems approach in dealing complex M&A activities. Mo and Nemes (2009) have argued that the complexity of M&A can be dealt using enterprise models developed through systematic design. As highlighted in Section 2.2, one of the gaps is the systems approach in planning transformational activities required for M&As preparedness building. Therefore in order to effectively establish the M&A preparedness building we need to consider the systematic design of required activities. This can be achieved through the selected research framework, as the research framework (GERAM) uses three categories of models to enable systematic design, representing

- Enterprise Entities,
- Life-cycle Processes of Enterprise Entities, and
- A system model which relates Enterprise Entities to Life-cycle Processes (as well as their temporal view, called Entity life history [cf Section 3.2.2.4])

Note that these Enterprise Architecture concepts can be seen as an application of systems engineering to enterprises.

For this research, the modelling is required for an example enterprise who wants to build preparedness for M&A. The models developed should effectively demonstrate major tasks and address the key issues/concerns of post-merger integration, because the aim of this preparedness building is to reduce the time, cost and risk for post-merger integration and effectively reduce the time of pre-merger deliberations.

In order to achieve above goal, the issues identified in the data collection should be addressed. The main issues for post-merger integration are related to Business, HR and IS. Enough research exists in each of those research fields; however according to Cartwright and Schoenberg (2006) the lack of multi-
disciplinary approach hinders to reduce the high failure rate. Now the focus of the modelling is to actually represent a way of building preparedness that maintains the strategic alignment between not only Business and IS but also with HR. This requires one to consider M&A as a complex system covering those three major aspects. This can be achieved through a systems approach in developing the example based meta-methodology for M&A preparedness building.

Figure 10 explains the systems approach in M&As.

Note that M&A are influenced by other organisational aspects such as economic and legal aspects. However they are considered but not analysed in this research as they are outside of the research focus.

As shown in Figure 10, the first part of the figure shows the isolated view of M&A issues related to three major organisational aspects namely Business and Management, HR and IS. In the first part, the modular structure of the individual aspects is clearly defined however their relationship with other involved issues and aspects was not clearly identified. Therefore it can be one possibility why the complex issues are not effectively addressed. One need to consider that the choices made for Business and Management integration can restrict the choices available for HR and IS integration, the same is true for the impact of the HR and IS integration choices. Hence it is necessary to adopt systems approach to understand and
analyse the complex M&A system. Through such view, we can identify the modular as well as inter subsystems relationships (i.e. second part of Fig. 10.).

We shall use a conceptual analytical research method to correlate, compare, design and analyse the constructs of these models. Table 1 summarises the research strategy adopted for the research project, and further discussion illustrate the choice of remaining research strategy components.

Table 1: Research Assumptions and Strategy

<table>
<thead>
<tr>
<th>Research Strategy/Assumption Component</th>
<th>Research Strategy/Assumption adopted for the research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Focus</td>
<td>M&amp;A Preparedness and Post-Merger Integration Planning</td>
</tr>
<tr>
<td>Research Method</td>
<td>Conceptual Analytical Research</td>
</tr>
<tr>
<td>Research Approach</td>
<td>Positivist Research Approach</td>
</tr>
<tr>
<td>Research Framework</td>
<td>GERAM (The IFIP-IFAC Task Force, 1999)</td>
</tr>
<tr>
<td>Theory Derivation Method</td>
<td>Inductive theory derivation</td>
</tr>
</tbody>
</table>

4.2 Research Approach

The aim of this research is to illustrate, through an example, how an enterprise can develop preparedness for the decided type of M&As. This research is in particular interested in developing a Roadmap for such preparedness building. It is assumed, that the example Roadmap will be valid, provided that the premises (the objective list of M&A issues identified by literature) and the selected method to derive the Roadmap are valid.

This is a Positivist Approach (see the definition below) to research as both the conclusions about M&A issues, as reflected by research literature as well as the enterprise engineering method (based on GERAM) used to develop the roadmap are objective in nature.

Orlikowski and Baroudi (1991) explain the positivist research approach as “Positivist studies are premised on the existence of a priori fixed relationships within phenomena which are typically investigated with structured instrumentation”. They (ibid) explain that in positivist research the researcher and ‘the object of inquiry’ (i.e. problem at hand / phenomena) are independent to each other. In this research, the conclusions of existing research are considered as a list of issues to be solved for M&As. These issues are then analysed to develop an example based meta-methodology to support organisations in building preparedness for decided M&A well in advance. The list of the objective data (i.e. conclusions from existing research) adopted in their original state (i.e. as they were stated in the literature). No further confirmations or interpretations were made of the collected data to validate the data. Therefore the list of issues (i.e. phenomena) is independent from the author’s subjective interpretations and subjective
meanings. Hence as per Orlikowski and Baroudi (1991)’s explanation, the research approach for this research is classified as Positivist research. Due to such approach it is possible that, if the list of issues is given to someone who knows the research framework, then he/she can derive similar models based on the given the plan of the M&A Preparedness Building.

Note: It is important to mention that the list of issues to be solved (i.e. the list considered as objective data) is gathered from existing research. Some of the existing research reported in literature may be based on objective, and some on subjective interpretive research approach, however the conclusions made by the literature are objective in nature, assuming that the researchers – no matter which approach they used – created objective and generalizable conclusions (unless stated otherwise, in which case they would not be used). Therefore the issues list collected from literature was accepted on face value. Figure 10 illustrates this note.

![Diagram: The Positivist Research's relationship with existing research](image)

Hirschheim and Klein (1989) describe four research paradigms to highlight underlying epistemological and ontological assumptions of a researcher. This framework is organised into two dimensions: Objectivism – Subjectivism and Order – Conflict. These two dimensions then provide four research paradigms,

1. Functionalism (Objectivism, Order)
2. Social Relativism (Subjectivism, Order)
3. Radical Structuralism (Objectivism, Conflict)
4. Neohumanism (Subjectivism, Conflict)

Given the above classification of research paradigms, this research is classified as Functionalist, because in our framework the view of the social world (the reality of M&As) is considered in an objective fashion where the reality is studied from ‘outside’ of the M&A world (rather than through a subjective interpretation).

According to Hirschheim and Klein (1989) the Order view emphasise on order, stability, integration, consensus and functional coordination of/about the phenomena; as against to the Conflict or Coercion view which stresses on change, conflict, disintegration and coercion of/about the phenomena. In this research, the purpose of the research is to synthesise existing literature on M&As and to systematically organised them using the research framework in order to develop an example based meta-methodology which demonstrates how to organise and coordinate the M&A preparedness building efforts. In addition, the research is aimed to derive a consensus about the requirement of comprehensive M&A preparedness building to reduce high failure rate. Hence in Order-Conflict dimension, this research’s view is Order not the Conflict.

The selected views - Objective and Order, together represent the Functionism research paradigm. Hirschheim and Klein (1989, pg.1201) state that “it (the functionalist paradigm) seeks to explain how the individual elements of a social system interact to form an integrated whole.” This is the case for the research. The research focus is clearly to synthesise existing literature in order to find M&A issues and then to demonstrate their interactions through the expected outcome of the research. Therefore this research is classified as Functionalist.
For this functionalist study, the M&A and post-merger integration issues will be studied through the lenses of a conceptual EA framework (GERAM). The M&A issues collected from literature will then be categorised using the stages of an enterprise's life, hence indirectly the literature review was guided by the research framework.

4.3 Theory Derivation Approach


According to Jarvinen (2004, pg. 32-33) the basic difference between Inductive and Deductive theory derivation is the source of theory derivation. In the inductive way, a theory is derived from empirical generalizations or by interpreting the results; while in the deductive way, a theory is derived from axioms or assumptions. Walliman (2005) explains the same difference as follows. Deductive theory derivation is a process from ‘general to more specific’ (Top-Down), while the inductive theory derivation is the process from ‘more specific to general’ (Bottom-Up). McMurray, Pace and Scott (2004, pg. 70) characterize the difference by saying that the start of deductive theory derivation is the end of the inductive theory derivation. All these statements of differences complement each other which can be seen from the structure of inductive and deductive theory derivation processes (i.e. Figure 13) as suggested by McMurray, Pace and Scott (2004, pg. 70).

Deductive Theory Derivation:

![Deductive Theory Derivation Diagram](image)

Inductive Theory Derivation:

![Inductive Theory Derivation Diagram](image)

Figure 13 Theory Derivation Approaches

Source: McMurray, Wayne Pace and Scott (2004, pg. 70)

McMurray, Pace and Scott (2004, pg. 70) recommend that these two ways complement each other and if needed they can be employed together. Further McMurray, Pace and Scott (2004) suggest to use the inductive way in a research where little is known about a particular phenomenon.
Though significant M&A literature exists (observing and deriving patterns of issues in M&As), there is lack of systems model (Section 2.2) and we use an EA Framework to interpret (conclude) a synthesis of the observed patterns (using Conceptual Analytical method) and ‘finish’ the theory building process by deriving a meta-methodology. (The meta-methodology qualifies as a theory from this point of view [see Section 4.1] as it can be used to predict / guide, and hence to prepare for, relevant future courses of events in M&As).

Therefore this research is based on the Inductive theory derivation approach. It should be noted that data was collected from literature review only. This data has provided information on the ‘how, what, why by whom’ of M&A and Post-Merger integration. Then the data was classified into groups. Consequently a tentative conclusion has been made that there is lack of preparedness building model. After that, based on the research framework, an example based meta-methodology for M&A preparedness building will be proposed.

Further Jarvinen (2004, pg. 32) suggests that inductive theory derivation builds a new theory / model by adding a new / deleting an old concept or relation. Among these variations of inductive theory derivation, this research will use building a new model by adding a new concept (systems models that extends the present scope of M&A research to preparedness building).

As a summary, we concluded that the selected research method is Conceptual Analytical research method, the research paradigm is Functionalist, the research approach is Positivist and the theory derivation approach is Inductive theory derivation. These theoretical grounds will then guide the research and restrict the research to certain considerations. For example, data analysis should be based on the face value of the collected data not on their subjective interpretations (i.e. Positivist research approach).

The research aim is to demonstrate an example based meta-methodology which requires modelling for M&A preparedness based on the research framework. Therefore we required data for the modelling. Further discussion describes the data collection and data analysis techniques.

In the conclusion of this thesis we shall discuss possible future validation needs for the so built theory / meta-methodology (such as through action research, for example).

4.4 Data Collection and Analysis

Data collection was done by reviewing literatures for M&A and post-merger integration issues. Hence data collection is entirely based on the literature. The interviews with experienced M&As professionals would be helpful to provide industry insight into the data collected. However the literature reviewed has already used such data collection methods to provide the industry insight. In addition the research focus is on to synthesize issues and to suggest EA practice through an example based meta-methodology, therefore the data collection restricted to existing literature only.
Data analysis will be conducted on the collected data. During data analysis, the issues will be mapped on to GERA’s life-cycle phases. During the mapping, (if any) missing issues can be identified which are not considered in the literature reviewed still has impact on the success of M&As. Hence further literature review will be conducted to find if any references available, otherwise new directions will be proposed (for example building preparedness for M&As before the M&A opportunity arose). Based on these set of issues, the required models can be developed to demonstrate the use of EA practice in M&A preparedness building. The model development methodology is explained in Section 5.

Hence after Data Collection, the Data Analysis and the Model Development altogether can be considered as a continuous process where the latter two activities will be performed continuously (one by one) and in parallel. This will help to save time and effectively develop the model.

4.5 Ethical Considerations

Ethical Clearance is not needed for the project as per the planning of the data collection. As mentioned in section 4.4 the data collection will be from literature and case studies, therefore the research project will not include any data collected directly from human. In addition the Ethical clearance Scope test provided by Griffith University was conducted and the result is attached as Appendix A. This test confirms that ethical clearance is not required for this research project.

4.6 Research Relevance to theory and practice

The research is aimed to demonstrate the use of EA practice in M&A preparedness building through an example based meta-methodology. In this research, diverse studies on M&A and post-merger integration from various research fields such as Business, HR, IS, EA are synthesized and summarised. The issues highlighted by existing research will be included in the example based modelling of M&A preparedness. Hence the existing research on M&A plays significant role in this study because, in addition to above arguments, the discussion of section 4.4 clarifies that the data collection is based on the existing literature. Therefore the study and the expected outcome are directly related to and based on the existing research. There upon it is expected that this research will provide a new insight to look at the conclusions of existing research and the reasons of the high failure rate.

The research is aimed to contribute to M&A practice by supporting higher management to achieve M&A preparedness. Studies of Larsen (2005) and Mehta and Hirschheim (2007) highlight the fact that M&A practice need to consider post-merger integration planning during pre-merger stage. Further they have noticed that post-merger delays are caused by the lack of enough planning during pre-merger phase. Therefore the models to be developed are aimed to serve as reference models (i.e. one can design one’s own from the proposed list) for M&A preparedness. Hence strategic management can refer to the proposed example based meta-methodology model to gain the idea of how to plan, design and implement M&A preparedness building within their organisation. Hence the research is also related to the M&A practice. The proposed contribution to theory and practice is discussed below.
4.6.1 Contribution to theory
This research will synthesize existing research on M&A and Post-merger integration in a way through which one can better utilise existing research. Currently, as briefly mentioned earlier (Section 2.0), the M&A literature have been developed hence it will be helpful to relate the existing literature for multi-disciplinary approach. Such multi-disciplinary approach can explore potential research opportunities to reduce / better understand the reasons of, the high failure rate of M&As, for example use of EA practice in M&A preparedness building. In addition, this research is aimed to fill the highlighted gap by considering Systems approach provided by the research framework and conducting multi-disciplinary (IT-HR-Business) approach in producing the expected outcome. The gaps were highlighted in section 2.2.

4.6.2 Contribution to practice
The model developed at the end of the research will be valid, reliable and rigor (see the discussion of Section 6.2). Therefore the example based meta-methodology model can support the business management to effectively plan the M&A Preparedness. Such model is capable to support the organisations who wish to transform themselves to an agile, interoperable and ready to merge organisation. Hence this model will be effective for M&A preparedness building in both cases (i.e. decided M&A and future M&A possibility). As mentioned earlier, the side-product of the expected model can serve as a reference checklist for pre-merger integration planning. If the model will be customised and applied properly then it can support integration team to conduct post-merger integration effectively. Subsequently if the post-merger integration would be completed within aimed time, the chances of M&A failure can be reduced because expected synergies would be achieved by that aimed time.
5 M&A Preparedness Building

Based on the discussion of previous sections, the next step of the research is to build a model for M&A preparedness building. Now, as discussed in section 4, we focus on post-merger integration from EA point of view. The analysis will enable the development of a model of preparedness building strategic activities. This model is built to support strategic management in considering, planning and enabling those types of M&As that management wish to keep as future options. First, this section describes in detail (based on existing research) the view of present M&A issues from an EA perspective (Figure 14). Second, the EA approach to establish the preparedness for M&A (Section 5.1) is followed by an actual model-development process (Sections 5.2 and 5.3).

As discussed in Section 4, the theory building process starts by identifying and articulating the concepts related to the research question. In our case these concepts were gathered through secondary data collection (i.e. from literature). Arguments from researchers and practitioners were summarized in Section 2 and allowed us to conclude major concerns and issues in M&As. Based on these synthesized preliminary concepts we identified three categories of M&A issues: Business-, HRM- and IS-. This completed the first step of the theory building process. Figure 11 summarizes the outcomes of the discussion covered in Sections 1, 2, 3 and 4 and highlights abstract constructs needed to consider in creating the model of preparedness building.

Figure 14 highlights the research context, research focus, research methodology and theoretical considerations. As shown in the figure, the issues having significant influence on post-merger integration success are grouped into three key categories, or enterprise aspects: Business and Management Issues, HRM Issues and IS Issues. This issues list was gathered by studying M&A and post-merger integration literature (Section 2). According to the research method discussed in Section 4.1, in order to build a meta-methodology (which is the theory build by this research) these concepts (referred to as ‘issues’) can be synthesized using a research framework (in our case GERAM).

By applying the GERAM framework to the problem at hand, an interesting fact will be demonstrated below, namely that existing research in these three disciplines (illustrated as coloured ellipses in Fig 11.) can be synthesized to suggest a single missing strategic activity: comprehensive preparedness building (represented as a triangle in the figure), whereupon this lack has significant influence on the success of post-merger integration. This argument is supported by existing research literature (see Section 2.1.1).
Schuler and Jackson (2001) argue that M&A are considered as an organisational change effort. Hence in order to build preparedness for M&A and post-merger integration, an enterprise wide change effort(s) is required. Researchers and Practitioners share the same view of project and program based planning and implementation for such significant change efforts.

Researchers from the enterprise architecture discipline recommend a long term program (or programs) governing other program(s) and/or project(s) to conduct change. Some examples are discussed below.

Molina and Carrasco (2003) have demonstrated the use of program design in Small and Medium Enterprises (SMEs) through a case study of Plastipart – a plastic car-parts production company whose clientele includes Ford. The CSIM-ITESM (Integrated Manufacturing Systems Centre – Technological
and Superior Studies Institute of Monterrey) has designed a program to support the SMEs in Mexican region. This program used a change project to design and implemented in Plastipart the required changes in order to achieve agility, dynamicity and flexibility in their production line.

Noran (2010) suggests a strategic change project to address newly emerged industry concerns of incorporating environmental management into daily operations. Through the proposal of an Environmental Management Implementation Project (EMP), Noran (2010) effectively demonstrates the use of EA concepts in planning and executing the EMP. These two examples (note that there exists many more) use the ISO 15704 (which includes the GERAM framework) to design program(s) and/or project(s) in order to systematically conduct enterprise wide change efforts.

Similarly, practitioners follow the concepts of program and project based change in order to plan M&A implementation. Sprott (2008) in his discussion of M&A planning recommends task specific program(s) and project(s) in order to plan and implement the M&A and post-merger integration. According to him such design helps to systematically allocate tasks to enterprise entities, to effectively monitor and integrate the task results. In addition Green (2010) of MERCER consulting company recommends the activity based project planning for building HR readiness for M&A. In the same manner Ronald Berger Strategy Consultants, in their one of the documents called Pre-merger preparation and post-merger integration (n.d.), specifies their project based approach to pre-merger preparation and post-merger integration. They categorises projects as per M&A stages (the above consultants referred the stages as phases - i.e. pre-merger, merger-day, and post-merger).

The above discussion strengthens the idea to prepare a strategic program for preparedness building in M&A. The research of Noran (2008) can guide the model development process based on the research framework. In his research Noran (2008, pg. 166) has provided a meta-methodology in order to plan EA tasks for building enterprise networks. The steps of Noran (2008)’s meta-methodology are,

a) identify the entities related to required tasks (i.e. entity list),  
b) building diagrams to show the ‘lives’ and inter-relations of identified entities (i.e. a so-called ‘dynamic business model’)  
c) step by step ‘reading the stories of these lives’ while noting the relations with other entities present in each step (i.e. timeline of strategic program).

Noran’s (2008) meta-methodology can be helpful, because the approach is in fact generic and does not rely on the concrete objective of change. Therefore we shall:

a) Identify enterprise entities relevant to M&As, their tasks (or mandate);  
b) Build diagrams to show the life-cycles (called lives in Noran, 2008) and life-cycle relationships of the identified entities;
c) Build life history diagrams to show the timeline, sequence and flow of the identified tasks in the temporal dimension (including milestones and expected outcomes).

Above steps will be followed to develop the models required for the expected meta-methodology. We shall use Weber's (2003) theory-building process to guide the process of meta-methodology development (on the higher level). The four steps of the meta-methodology (our theory) building are shown in Fig. 15.

To avoid any confusion it should be noted that Noran’s (2008) meta-methodology steps will be used to develop the models needed for discussion of Sections 5.1, 5.2 and 5.3. Weber’s (2003) theory building process steps will be used to guide the development of the example based meta-methodology (i.e. Sections 5.1, 5.2, 5.3 & 5.4).

Figure 15: Development Process of A meta-methodology for M&A Preparedness Building

The development of the meta-methodology for M&A preparedness building is shown in Figure 15. The first step is to identify relevant enterprise entities, their tasks (mandate). The second step is to show the life-cycles and life-cycle relationships of these involved entities. The third step is to demonstrate the timeline of each task (including milestones and expected outcomes). In the fourth step, when the timeline for all involved tasks is completed demonstrates the timeline of a complete M&A PBSP (step 4 in Fig. 12).
Table 2 provides an outline of the model-development process steps (i.e. Figure 15).

**Table 2: Planning of M&A Preparedness Building (discussion)**

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Discussed in Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>M&amp;A Preparedness Building as a Strategic Program</td>
<td>This discussion will identify (needed/affected) enterprise entities, what needs to be done (tasks and mandate) by all identified entities, including those of the change projects and change program(s).</td>
<td>5.1</td>
</tr>
<tr>
<td>Dynamic Business Model of the Preparedness Building Transformation</td>
<td>This discussion will demonstrate how each needed/affected enterprise entity is related to other entities (and participates in carrying out the change required). In EA terms, we will identify the lifecycle phases of each entity and how one entity covers other entities’ lifecycle phases (i.e. how it performs, or participates in, the change of the other entity). A clear explanation will be given of how entities are associated with each other.</td>
<td>5.2</td>
</tr>
<tr>
<td>Timeline of M&amp;A Preparedness Building</td>
<td>This discussion will provide a complete stage by stage timeline (description of priority and sequence of tasks) of the preparedness building, including milestones and deliverables of each stage. This timeline model can be a basis for further implementation modelling such as the development of detailed activity diagrams, GANTT chart, etc.</td>
<td>5.3</td>
</tr>
<tr>
<td>The complete outline of M&amp;A Preparedness Building</td>
<td>This discussion will provide a complete outline of M&amp;A preparedness building by summarising the discussion of Sections 5.1, 5.2 and 5.3</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Such preparedness building meta-methodology model is lacking in the existing literature (see Section 2.3). We shall demonstrate below that the so developed model can cover all major aspect of M&A – and therefore can be the model of comprehensive preparedness building, covering management, HR and IS views.

Every deal is different and unique hence the level and type of preparedness required (as well as post-merger integration planning) can vary deal to deal and organisation to organisation. Therefore the level of detail for each of the projects and their tasks mentioned in the program can vary. However, the basic
structure of key tasks involved in preparedness building for M&A can be the same for all M&A preparedness building efforts. Hence, the strategic program proposed here considers the commonly agreed on M&A issues (as discussed in Section 2) that commonly arise in post-merger integration planning and implementation.

Due to the uniqueness of each enterprise’s situation there exist no single methodology, however the meta-methodology is intended to be universally applicable. Our meta-methodology for preparedness building will be demonstrated through an example in Sections 5.1, 5.2 and 5.3.

The example of M&A preparedness building is based on horizontal mergers in the banking industry. This example is based on a real life M&A case of two Indian banks (Press Releases, n.d.). Note that no data were collected directly from any of the banks and the completed deal. However, this deal is considered just as an example to prepare the meta-methodology in order to demonstrate the use of EA concepts and framework in M&A preparedness building.


5.1 M&A Preparedness Building as a Strategic Program

As the need for a strategic program is evident in order to build preparedness for M&As, the first step is to identify the required entities and plan the tasks for each of these entities. At the end of this stage the involved entities, their major tasks / mandate shall be specified. Further discussion illustrates the derivation of each of the components of an M&A Preparedness Building Strategic Program (M&A PBSP).

5.1.1 Identification of Enterprise Entities

Entities can be identified in two groups: needed entities (i.e. new entities required) and affected entities (i.e. existing entities involved in the M&A Preparedness Building, either as actors or as entities that need change). The identification of entities can be done by carefully considering the issues needed to be addressed.

Firstly, affected entities can be identified as belonging to one of two groups:

a) Enterprise entities performing business functions / services which are potential candidates for sharing after post-merger integration (for example, human, IS, Application, Information Service, etc.). Such functions / services need to be ‘separated out’ before post-merger integration (discussed in more detail in Section 5.3 - Requirement Analysis Project). In other words these
are perfectly functioning enterprise entities which require no change for M&A Preparedness Building purposes.

b) All other enterprise entities having major/minor effect due to the changes required of them in order to build the preparedness for M&A. These are business units/functions which *may* require complete/major/minor change for post-merger integration. The discussion below identifies several affected enterprise entities for our example.

Each enterprise has their own regulatory bodies (i.e. governmental bodies, controlling industry bodies, legal bodies etc.). These regulatory bodies monitor, indirectly control and guide the organisational operations. Regulatory bodies are external to the enterprise (i.e. not the part of the enterprise in focus) however they have some control over the organisational processes. Hence though they are not considered as an internal enterprise entity, they are considered as external reference entities.

Here in our example the bank as an enterprise has a Head Quarters (HQ) which manages the branches (i.e. bank branches). During M&A Preparedness building the operations and the management of HQ and of other business units (branches, including employees, (if any) suppliers and other involved stakeholders) will be, or may be, affected. Hence the HQ (i.e. Strategic Management Enterprise Entity) and Business Units are in the list of affected enterprise entities.

The bank will have its own Services (Application, Information and Business Process Execution Services) with existing Technical Infrastructure to support its operation. The mentioned services are repetitive service entities (cf Section 3). During the M&A Preparedness Building, the mentioned services and Technical Infrastructure may be affected. Hence the affected enterprise entity list will include repetitive service entities namely Application Service, Information Service, Business Process Execution Service and Technical Infrastructure.

Secondly, additional enterprise entities can be identified (such as projects and / or programs necessary to perform organizational change); this can be done by considering the required preparedness building tasks so as to ensure that measures are taken to address that subset of issues (Section 2.2) which are found relevant from the particular bank’s strategic point of view.

Further discussion below will identify the needed enterprise entities for the required organisational change effort (for M&A preparedness building in our example), while the actual tasks of these entities will be discussed in Section 5.1.2.

The M&A PBSP is itself a strategic management enterprise entity which identifies the need for an enterprise integration/change effort. Therefore the M&A PBSP is a needed enterprise entity.

PBSP as a strategic management program needs to:

- find out the level and type of preparedness required;
• estimate the risks, time and cost required;
• identify future post-merger possibilities etc.

Because based on the above analyses it is possible to identify what preparedness building tasks exist (including their priorities and interdependencies) and therefore what change projects to create. It is possible to allocate all of the above analyses to a Feasibility Study Project.

HR researchers (Rodriguez, 2008; Schweiger & Denisi, 1991; Schuler & Jackson, 2001) argue that communication and participation is vital in M&As. Poor communication arrangements adversely impact the success of a post-merger integration effort. The same can be applied to preparedness building. Employees from top to bottom should share the common enterprise-wide vision to establish M&A preparedness. A way to ensure this is to create a project entity, with the mandate to organise the communication and participation activities to ease the resistance during preparedness building. This project entity may be named the Communication and Participation Project.

The PBSP entity can create and govern project entities which in turn support, or conduct, the required changes. The main aspects (sets of issues) of M&A preparedness building are business and management, HR and IS. Normally these are considered as independent functions of an enterprise (although they are supporting and complementing each other). One possible way to attack these three independent sets of issues is to create three functionally independent Entities. These entities will perform a one-off change each hence they will be project entities. The three project entities are therefore the following:

- Business Preparedness Building Project,
- HR Preparedness Building Project,
- IS Preparedness Building Project.

The above three project entities need basic information to guide their mandate (such as their respective key tasks, what is expected from them (i.e. goals), what type and how much of resources may be used, etc.). In order to specify the mandates of these three projects in a self-consistent and harmonious manner it is possible to allocate these specification tasks to a single project entity, from here on called the Requirement Specification Project (or ‘GAP Analysis Project’). I.e. this project specifies the requirements for the change project entities above.

The Requirement Specification Project (GAP Analysis Project) needs basic information (i.e. information about the part of the enterprise which is/will be associated/affected with the required change efforts), both regarding the current state of the enterprise entities and the expected state of these enterprise entities. In modelling terminology the current state is known as ‘As-Is’ state and the expected state is known as ‘To-Be’ state. Consequently two project entities may be created as sub-project of the GAP
Analysis project: the **As-Is State Documentation Project** (i.e. to document the As-Is state) and **To-Be State Documentation Project** (i.e. to document the To-Be state).

Based on the outcome of the GAP Analysis Project, the Business Preparedness Building Project will receive a mandate regarding what level of flexibility is desired of business processes, and what needs to be changed in the way the bank is managing its business processes. Hence a project can be created to introduce flexibility to existing business process management, and/or to modify current business processes. This project may be called a **Business Process Flexibility Project**.

The above identified enterprise entities are listed in Table 3 below.

<table>
<thead>
<tr>
<th>No.</th>
<th>Enterprise Entity Type</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entity 1</td>
<td>External reference entity</td>
<td>Regulatory Bodies</td>
</tr>
<tr>
<td>Entity 2</td>
<td>Strategic management enterprise entity</td>
<td>Head Quarter (H.Q.)</td>
</tr>
<tr>
<td>Entity 3</td>
<td>Strategic management enterprise entity</td>
<td>M&amp;A Preparedness Program (PBSP)</td>
</tr>
<tr>
<td>Entity 4</td>
<td>Enterprise Entity</td>
<td>Business Units</td>
</tr>
<tr>
<td>Entity 5</td>
<td>Repetitive Service Entity</td>
<td>Business Process Execution Service</td>
</tr>
<tr>
<td>Entity 6</td>
<td>Repetitive Service Entity</td>
<td>Application Service</td>
</tr>
<tr>
<td>Entity 7</td>
<td>Repetitive Service Entity</td>
<td>Information Service</td>
</tr>
<tr>
<td>Entity 8</td>
<td>Enterprise Entity</td>
<td>Technical Infrastructure</td>
</tr>
<tr>
<td>Entity 9</td>
<td>Enterprise Project Entity</td>
<td>Feasibility Study Project</td>
</tr>
<tr>
<td>Entity 10</td>
<td>Enterprise Project Entity</td>
<td>Communication and Participation Project</td>
</tr>
<tr>
<td>Entity 11</td>
<td>Enterprise Project Entity</td>
<td>As-Is Documentation Project</td>
</tr>
<tr>
<td>Entity 12</td>
<td>Enterprise Project Entity</td>
<td>To-Be Documentation Project</td>
</tr>
<tr>
<td>Entity 13</td>
<td>Enterprise Project Entity</td>
<td>Requirement Specification (GAP Analysis) Project</td>
</tr>
<tr>
<td>Entity 14</td>
<td>Enterprise Project Entity</td>
<td>Business Preparedness Building Project</td>
</tr>
<tr>
<td>Entity 15</td>
<td>Enterprise Project Entity</td>
<td>HR Preparedness Building Project</td>
</tr>
<tr>
<td>Entity 16</td>
<td>Enterprise Project Entity</td>
<td>IS Preparedness Building Project</td>
</tr>
<tr>
<td>Entity 17</td>
<td>Enterprise Project Entity</td>
<td>Business Process Flexibility Project</td>
</tr>
</tbody>
</table>

After identifying the needed and affected enterprise entities, we set out to describe the tasks of each of these entities (see Section 5.1.2).

**5.1.2 Identification of Tasks**

The following discussion will further detail / identify typical tasks for each project in the order in which these project entities were identified in Section 5.1.1.
Tasks of M&A PBSP can be divided into three categories: tasks for planning stage of M&A PBSP (before the Program’s change projects start), tasks of the execution stage of M&A PBSP (when the program is running its change projects), and maintenance stage tasks of M&A PBSP (after the preparedness building projects have completed). The M&A PBSP can take a comparatively long time and it can continue its operation after post-merger integration (due to the fact that the program may be called upon whenever HQ identifies new possible company directions).

The M&A PBSP tasks involved in the planning stage is to perform several strategic analyses on motive of M&A to develop long-term and short-term goals of M&A, type of targeted possible M&As, operational model during the transformation, M&A strategies, M&A policies and principles, and to perform SWOT (Strengths-Weaknesses-Opportunities-Threats) Analysis as well as other strategic analyses deemed necessary. The mentioned strategic analyses help strategic management visualise future targeted (or targetable!) pathways, company goals, strategic objectives, organisational culture and availability of resources. Hence, to identify a company-oriented M&A roadmap is important before initiating preparedness building projects – otherwise the number of possible preparedness building tasks may become too long, and some may not be relevant for the bank.

These strategic analyses can then enable the identification of the role of government and regulatory bodies, legal bodies, industry restrictions in the types of M&As the bank may wish to be able to target in an agile way. At the end of this planning stage, a decision needs to be made on the M&A options that strategic management want to keep open for the future.

A project can be organised to conduct the mentioned strategic analyses; this project may be called the Strategic Analyses Project (SAP). Hence the first task of the M&A PBSP is to create and operate a SAP.

In addition to the above strategic analyses, technology analysis can be helpful to decide on the necessary technological changes required. The technology analysis involves audit of current technical infrastructure, assessment of current technology, technologies that will be available in future (trends analysis) and the assessment of any other company related technological advancements that can impact the established preparedness in the future. A separate project can be designed called Technology Analysis Project (TAP) to explore the mentioned technological issues. Hence the second task of the M&A PBSP during the planning stage will be to create and operate the TAP.

The reports of the SAP and TAP can then enable the M&A PBSP to initiate the ‘execution stage’ to build M&A preparedness for the enterprise. During the execution stage the tasks of the M&A PBSP will be to establish, monitor, control and guide the operations of its projects. The M&A PBSP will be responsible to co-ordinate these projects, to synthesize the outcomes of individual projects and to monitor the progress of its own operation.
The actual M&A preparedness building process starts with a feasibility study. Feasibility study should include due diligence (Walter (2004)). Perry and Herd (2004) suggest that due diligence should cover assessment of operational and business management issues and risks. They highlight the fact that improved due diligence can support M&A strategy building and improve post-merger integration. Schuler and Jackson (2001) suggest that strategic HR management should conduct due diligence for itself during the pre-merger stage. The same can be applied to IS. In addition feasibility study involves tasks like estimation of time, effort, resources and resistance involved in M&A preparedness building. Such estimation can guide further projects to plan for their tasks and resource allocation. Furthermore a feasibility study can be helpful to verify whether the expected outcomes (as defined by the SAP and TAP) are realistic and achievable or not. Therefore the major tasks of the Feasibility Study Project (FSP) are to exercise due diligence in order to identify potential strengths, weaknesses, opportunities and threats involved in the M&A PBSP strategy.

Following the FSP, the PBSP should plan to ease the resistance and to gain overall participation across the enterprise. This can be assisted by a Communication and Participation Project (CPP). Major tasks of this project are:

1. to work out communication strategies,
2. to plan for activities which can achieve participation from every level of the enterprise,
3. to reduce and resolve employees’ concerns and issues (e.g. anxiety levels),
4. to identify necessary training and educational requirements.

The above tasks are significant from the preparedness building perspective because, as Schweiger and Denisi (1991) argue, lack of communication causes uncertainty among employees which is the most stressful part of the change for employees, not the change itself in M&A. Similarly, Rodriguez (2008) in his study highlights the importance of top-down communication in reducing resistance and achieving enterprise-wide participation in the banking industry’s M&A. In addition, according to Schuler and Jackson (2001), M&A planning should incorporate planning and strategies for achieving overall organisational participation for better M&A results. Hence the major tasks of Communication and Participation project are to plan and implement effective activities to facilitate top-down communication and to achieve participation from every level of the organisation.

It should be noted that the operation of the CPP will start before the operation of the FSP. The reason is the following. According to Rodriguez (2008), during the M&A contemplation period, strategic management should involve key HR experts. Therefore from that point in time top-down communication, as decided by strategic management and HR experts, should start. This note is demonstrated in Section 5.3.2. that describes the timeline (‘life history’).
The above two projects set and maintain the environment for the M&A PBSP to operate. The next task of M&A PBSP is to identify the future (to-be) requirements (i.e. requirements associated with business, HR and IS aspects of the enterprise).

As mentioned earlier, this requirement specification can be done in three steps: identify current state, visualise future state, and then identify gaps (which can be converted into a list of tasks for transformation projects). For each of these three steps three projects may be created namely As-Is State Documentation Project (AISDP), To-Be State Documentation Project (TBSDP), and (Transformation) Requirements Specification Project (RSP) (often called a ‘Gap Analysis and Planning Project’).

For the **As-Is State Documentation Project** (AISDP), the major task is to develop As-Is models of the current organisation in order to inform the project that designs / documents the future state of the enterprise. Before starting the modelling, the scope of modelling should be decided. This can be decided from the outcomes (i.e. reports) of the FSP, the SAP and the TAP. Based on these reports, key affected enterprise components can be identified. These affected components then can be categorised as,

1. Those which require complete replacement, not just a change,
2. Those which require no change at all, and is expected to keep operating as-is,
3. Those which require change but not a complete replacement.

From the above categories, As-Is models are not required for the first two, because the As-Is models would not be used to derive the To-Be models (Uppington & Bernus, 1998; Williams et al, 2001). Hence the task of the AISDP is to document the current state of the enterprise for elements in the third category of the enterprise components.

In turn, the **To-Be State Documentation Project** (TBSDP) should propose the future state of the enterprise through the development of future state enterprise models. The To-Be models should consider the agreed M&A strategy and the identified goals of the M&A PBSP. The tasks involved in this project will be to prepare To-Be models for all organisational components to be effected (directly or indirectly) by the M&A PBSP. The involved components were identified previously in the FSP. To-Be models should describe the expected outcome in a way that can provide a guiding roadmap (a ‘Master Plan’) for further projects.

Based on the outcomes (i.e. reports) of AISDP and TBSDP, the **Requirement Specification Project** (RSP) can perform the Gap Analysis to identify the gaps between the current and desired states of the enterprise. These identified gaps can then enable the RSP team to propose transformation tasks to the M&A PBSP. Such requirement specification describes **what is needed to be done** in order to establish the To-Be State (i.e. M&A preparedness) of the enterprise. Hence the major task of the RSP is to analyse the AISDP and TBSDP reports and to perform Gap Analysis in order to derive requirements for M&A PBSP.

The RSP report can then be analysed to find out what is required to be done in three organisational aspects namely Business, HR and IS. The **Business Preparedness Building Project** (BPBP) will be
responsible for the mentioned analysis of the RSP report. In addition the BPBP should guide HR and IS Preparedness Building Projects (i.e. HRPBP and ISPBP respectively), because

1. For effective transformations, IS strategy should be aligned to business strategy (Henderson & Venkatraman, 1993)
2. IT integration strategies should be aligned with M&A strategy (Wijnhoven, et. al., 2006)
3. HRM Strategy should be aligned to business strategy (Schuler & Jackson, 1987)
4. HRM strategy should be aligned to M&A strategy (Aguilera & Dencker, 2004)

Therefore, the major task of the BPBP is to analyse the RSP report to identify and categorise tasks for BPBP, HRPBP and ISPBP such that the strategic alignment among M&A, Business, HR and IS strategies is maintained. After finding the tasks, the BPBP should conduct the preparedness building change activities and monitor HRPBP and ISPBP tasks. During the operation, BPBP may propose some changes, in company policies and principles, which required to be made in order to build preparedness for M&A. In this case the BPBP can propose changes to the strategic management of the enterprise.

The Human Resources Preparedness Building Project (HRPBP) in turn is responsible to conduct tasks suggested by the BPBP. In order to build preparedness for HR, the major tasks of the HRPBP are,

1. To gain knowledge of, make improvements and standardise current HR practices (Schuler and Jackson, 2001)
2. To formulate HRM strategies in alignment with M&A strategy (Aguilera & Dencker, 2004)
3. To plan about strategic HR moves such as, creating transition teams, providing training, addressing cultural issues, providing leadership, develop and oversee staffing strategies (i.e. strategies for selection, retention, separation and cut-off processes) (Schuler & Jackson, 2001)
4. To provide input to manage the transformation process (Schuler & Jackson, 2001)

The Information Systems Preparedness Building Project (ISPBP) would have the list of recommended tasks given by the BPBP. The major tasks of the ISPBP will be to prepare IS functions and processes in order to enable the effective IS integration. Many researchers have made the argument about necessity of effective IS integration for the success of M&A deals. Therefore the important factors need to be considered for building IS preparedness will be,

1. To design IS strategies which aligned with overall M&A strategy,
2. To identify, consider and configure possible IS integration options,
3. To standardise IS processes and functions,
4. To plan the integration of Technical Infrastructure, Technological Platform (including Operating Systems), Applications and Databases.

As discussed in Section 2, the necessary preparedness depends on strategic aims of the bank, and therefore has implications on the desired IS architecture. E.g. some operational models require data integration and accordingly uniform database system and information architecture, while other operational
models may not. Similarly, some operational models (desirable after M&A) may require process uniformity (with consequential requirements for process definitions and process execution IT support), while other operational models may not, etc. (Ross, Weil and Robertson, 2006).

Therefore during preparedness building, BPBP may identify some existing business processes that require to be modified in order to achieve M&A preparedness at business processes level. For this task, a project was identified namely the Business Process Flexibility Project (BPFP). The BPFP can provide required changes in the existing business processes and their governance. These changes aimed to make current business processes flexible, agile, service oriented or functionally independent (possibly with consequences on the IS architecture). For the mentioned reasons, the BPFP have to plan and design modifications which can then guide the Business Process Execution Service to support the dynamic changes of business processes by BUs.

After concluding the above projects, the M&A PBSP will perform ‘maintenance stage’ tasks. The major tasks of this stage are to maintain the established M&A preparedness. These tasks include:

1. Ensuring that To-Be state is maintained throughout any organisational changes such as introduction of new resource, business process or product into the enterprise,
2. Ensuring that current enterprise models are consistent throughout any new changes,
3. Future changes are made in such a way which maintains the established M&A preparedness.

The above discussion outlined the task identification for the involved change projects. This discussion reflects the inclusion of key viewpoints (as suggested by the literature) such as:

1. Consideration of HR and IS in M&A preparedness,
2. Strategic alignment between M&A strategy and Business, HR and IS strategy,
3. Consideration of major Business, HR and IS issues.

It is important to note that this task identification can vary depending on the type of the deals considered as important by the bank and the organisations involved in such M&A deals. However, the literature reviewed concluded that the above viewpoints have significant impact on the success of M&As. Therefore the tasks identified can provide a comprehensive requirements list for an M&A preparedness building effort; and such list can be customised to prepare an organizations-specific tasks list.

Based on the identified tasks, a program mandate can be prepared for M&A PBSP which can guide the operation of involved projects and overall transformation effort. Further discussion summarises the identified enterprise entities and their tasks in a tabular format.
5.1.3 Summary of Identified Entities and their Tasks

The discussion of previous two sections can be summarised to prepare a basis of program mandate for M&A PBSP. The development of the Program mandate is necessary for developing example based meta-methodology for the M&A preparedness building. In the following discussion, each previously identified project entity (from section 5.1.1) is associated with its major tasks (from section 5.1.2).

The basis for a program mandate is presented below in Table 4.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Involved Key Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 M&amp;A Preparedness Program</td>
<td><strong>Strategic Analysis Project</strong>&lt;br&gt;Perform strategic analysis and derive targeted M&amp;A option. Design strategies, policies and principles needed for the M&amp;A program. <strong>Technology Analysis Project</strong>&lt;br&gt;Perform technology analysis and help strategic analysis project. <strong>Coordination Program</strong>&lt;br&gt;Coordinate involved projects and their tasks <strong>Preparedness Maintenance Project</strong>&lt;br&gt;Analyse any required changes (i.e. new recruitment, introduction of new resource, process or function )&lt;br&gt;Consider the impact on built M&amp;A preparedness before implementing any new changes&lt;br&gt;Reflect any necessary changes made to current organisational state in relevant documents and models.</td>
</tr>
<tr>
<td>2 Feasibility Study Project</td>
<td><strong>Due Diligence</strong>&lt;br&gt;Estimate cost, time, effort and resources, Estimate resistance, Identify potential and realistic outcomes</td>
</tr>
<tr>
<td>3 Communication and Participation Project</td>
<td>Communicate key decisions through to ground level staff&lt;br&gt;Reduce resistance, anxiety and rumours during the program proceedings through effective top-down communication&lt;br&gt;Enable participation from each level of the organisation</td>
</tr>
<tr>
<td>4 As-Is Organisational State Documentation Project</td>
<td>Identify the level of detail required for As-Is information&lt;br&gt;Identify activities and processes through which As-Is information can be gathered&lt;br&gt;Collect and Document As-Is information&lt;br&gt;Develop As-Is organisational models</td>
</tr>
<tr>
<td>5 To-Be organisational State documentation Project</td>
<td>Visualise To-Be organisational state based on expected outcomes and requirements&lt;br&gt;Propose To-Be state of organisation through models and documentations</td>
</tr>
<tr>
<td>6 Requirement Specification Project (Gap Analysis)</td>
<td>Perform Gap Analysis on reports of AISDP and TBSDP&lt;br&gt;Identify and document requirements of M&amp;A PBSP</td>
</tr>
<tr>
<td>7 Business Preparedness building project</td>
<td>Design a Coherent integration strategy&lt;br&gt;Prepare for overall organisational integration to the required level&lt;br&gt;Define business processes (incl. mgmt/decision making), functions, and information</td>
</tr>
</tbody>
</table>
5.2 Dynamic Business Model of the Preparedness Building Transformation

Following the program mandate, we require to develop the ‘dynamic business model’ of the enterprise which can describe the life-cycle relationships of identified entities. Uppington and Bernus (2003, pg. 315) describe the business model as “the system of relationships between enterprise entities involved (the way they are, or will be, doing business together)”. They (ibid, pg. 316) introduce the ‘dynamic business model’ as a “somewhat different representation or business model in which each enterprise entity is visualised through a graphical symbol”, showing eight life-cycle phases of each entity. This relationship demonstration can help us identify the role of each entity in the change effort and the role of an entity in the life-cycle of the other entity (Uppington & Bernus, 2003, pg. 316-317). Hence it is necessary and possible to show the relationships of previously identified entities and their tasks with other entities using a dynamic business model (Noran, 2008). In road-map planning of M&A preparedness building as a change process, the dynamic business model can be an advantage, because (as will be demonstrated in Section 5.3) it is possible to read from this model the basic structure of an implementation plan to be represented on the timeline. In this section, the dynamic business model for M&A PBSP is developed and explained.

Starting with the conventions of the dynamic business model, Figure 16 shows symbols used in such a dynamic business model diagram.
The dynamic business model for our case is shown in Figure 17 to 19. To improve the readability and to reduce the complexity, the original dynamic business model is broken down into three separate parts and mentioned individually in following discussion.

The M&A PBSP is considered as a change program; hence it is assume that the example bank has its own dynamic business model mentioning existing entities and their relationships. Therefore the presented dynamic business models (using the research framework which might be different than that of the existing models), in addition to new relationships, highlight the changes in the existing relationships among identified enterprise entities.
Table 5 summarises the abbreviations used in this discussion.

<table>
<thead>
<tr>
<th>Abbreviations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AISDP</td>
<td>As-IS State Documentation Project</td>
</tr>
<tr>
<td>AS</td>
<td>Application Service</td>
</tr>
<tr>
<td>BPBP</td>
<td>Business Preparedness Building Project</td>
</tr>
<tr>
<td>BPES</td>
<td>Business Process Execution Service</td>
</tr>
<tr>
<td>BPFP</td>
<td>Business Process Flexibility Project</td>
</tr>
<tr>
<td>BU</td>
<td>Business Unit</td>
</tr>
<tr>
<td>CPP</td>
<td>Communication and Participation Project</td>
</tr>
<tr>
<td>FSP</td>
<td>Feasibility Study Project</td>
</tr>
<tr>
<td>HQ</td>
<td>Head Quarter</td>
</tr>
<tr>
<td>HRPBP</td>
<td>HR Preparedness Building Project</td>
</tr>
<tr>
<td>InfS</td>
<td>Information Service</td>
</tr>
<tr>
<td>ISPBP</td>
<td>IS Preparedness Building Project</td>
</tr>
<tr>
<td>M&amp;A PBSP</td>
<td>M&amp;A Preparedness Building Strategic Program</td>
</tr>
<tr>
<td>RSP</td>
<td>Requirement Specification (Gap Analysis) Project</td>
</tr>
<tr>
<td>TBSDP</td>
<td>To-Be State Documentation Project</td>
</tr>
</tbody>
</table>

Here we can summarise the dynamic business model through concise text consists of frequent lexical references to the GERAM framework and ISO15704:2001. The GERAM framework provides rich meaning for each of the lexical references used in the following discussion of the dynamic business model. For example, if we say *entity A covers life-cycle activities of entity B*, the details of tasks involved have a rich explanation of involved activities based on the scope definitions of each life-cycle phase in the GERAM framework. As a consequence a simple statement e.g. *‘entity A covers the detailed design of entity B’* carries a rich connotation to a design methodology for a function, information, resource, Human Resource, software, hardware, organisation and process.
Figure 17: Dynamic Business Model of M&A PBSP (Part - A)
Figure 17 shows the first part of the dynamic business model for the M&A PBSP and shows the life-cycle relationships of the involved entities. To explain the business model, a sequence of the to-be proposed typical M&A preparedness building process is followed.

In M&A, as mentioned earlier enterprises are bound to follow the rules and regulations of regulatory bodies. Regulatory bodies can be governmental bodies, legal bodies, industrial bodies and if any environmental bodies. In our case, the Indian bank receives various controls from the Central Government of India, the Finance Ministry of India, Reserve Bank of India, and from legal bodies. These regulatory bodies provide reference models consisting of rules, regulations, policies and principles which the bank has to follow during its operation. Similarly, during an M&A process the bank has to comply with the terms set by the above regulatory bodies; such terms provide operational guidance to the HQ of the bank.

Under agreed terms and conditions, the HQ of the bank decides to prepare for possible M&As. HQ decides to initiate a strategic program to carry out the changes required for building M&A preparedness. HQ identifies, conceptualises and specifies requirements for the M&A PBSP. HQ helps the M&A PBSP to do some of its architectural design by suggesting a strategic management team and by providing the basis for a master plan of the program, including the mandate (discussed in section 5.1.3) that M&A PBSP has to satisfy. With the above mentioned activities HQ effectively defines the mission and vision of the M&A PBSP program and specifies requirement of the M&A PBSP.

Then the M&A PBSP management itself will be responsible for the Architectural Design, Detailed Design, Building and Operation of this program. During the Detailed Design phase, program management designs the program team, and plans the tasks for M&A preparedness building. In the planning of tasks, the program team follows a project based design to develop the detailed design of the program (i.e. to identify projects, their tasks and prepare a mandate for each project). Hence the M&A PBSP program management team is responsible for the remaining life-cycle phases of M&A PBSP.

During the operation of M&A PBSP, the program team identify, conceptualise and specify requirements of the identified projects, one by one starting with FSP followed by CPP, AISDP, TBSDP, RSP and BPBP. The M&A PBSP team only identifies and conceptualises the HRPBP and ISPBP, because the mandate of these projects will have to be defined by the Business Preparedness Building Project (BPBP).

Note that different types of M&A preparedness call for different operational models and therefore the objectives that the BPBP must achieve will depend on the strategic choice in terms of M&A preparedness (Ross et al, 2006). E.g. if the bank’s strategic management wish only to rely on M&As that optimize the use of technology, but do not require information or process sharing among future merged constituents then this will create a specific mandate for the BPBP. In other situations the strategic choice may dictate that M&As of interest will benefit the bank by sharing information among the merged constituents (e.g. for...
market access) therefore information integration ability / interoperability building will be one of the BPBPs mandates.

The M&A PBSP team do some of the architectural design of the FSP by specifying the project management team and by preparing the master plan for the project. Based on this master plan, the FSP management team does the detailed design of the project, by identifying project resources, tasks and activities and their plan and schedule. In the next life-cycle phase – Build, the FSP management team hires human resources, allocates other non-human resources and builds up the project so as it is ready to operate. (Note that the above typically happens in parallel, and projects are normally gradually ‘ramped up’ as time progresses.)

The same sequence of activities is true for the CPP, except the architectural design which is done by the CPP itself instead of the M&A PBSP. This is due to the fact that, the CPP activities and master plan highly rely on the current organisational structure, employees’ perceptions and expected level of resistance to the change. Such organisational behaviours may keep changing through the course of building preparedness. Hence it is necessary to provide authority to the CPP team to design the master plan and edit the plan as required. However, such amendments to the master plan should be approved by the M&A PBSP and HQ. Despite that, the authority to the CPP can speed up the changes and customisation required in the project itself. Therefore the architectural design is considered as the responsibility of the CPP management team. During the operation, the CPP provides operational support to business units.

On the contrary, the AISDP and the TBSDP are entirely managed by the M&A PBSP team because,

1. both of the projects are smaller and less complex in terms of their operation and activities
2. the resources required for both projects are similar
3. their life time is shorter than that of other projects
4. these two projects will not need to run simultaneously which allows the reusability of resources

Hence the M&A PBSP team can effectively manage the AISDP and the TBSDP. During their respective operations, the AISDP prepare an As-Is report and the TBSDP prepare a To-Be report on the present / desired organisational states.

Following the AISDP and the TBSDP, the RSP (Gap Analysis Project) needs to be operationalized. The RSP team is responsible for its two life-cycle phases namely, detailed design, build. Based on the reports of the AISDP and the TBSDP, the RSP team performs a GAP analysis during its operation and specifies the changes that the bank has to achieve to establish the preparedness for M&A. The report of the RSP is important for M&A PBSP as the report can guide further operations of the M&A PBSP.

As the identified changes require, the M&A PBSP defines three separate projects called BPBP, HRPBP and ISPBP in order to make changes in three organisational aspects namely business and management,
HR and IS respectively. The Business Preparedness Project (BPBP) will be the governing project of the other two. This provision is made to maintain the strategic alignment of business, HR and IS.

Therefore the M&A PBSP identifies, conceptualises, and specifies the requirements only of the BPBP. In turn the BPBP will help establish the HRPBP and the ISPBP. The M&A PBSP also specifies the management team for the BPBP, which with the help of the M&A PBSP team prepares a project master plan and a project mandate. In turn, based on the identified gaps during the RSP, the BPBP team develop the detailed tasks design of the BPBP. Then the BPBP team build the project operation by allocating resources and tasks. During its operation phase, the BPBP specifies requirements and help develop the architectural and detailed design of the HRPBP and the ISPBP.

The HRPBP and the ISPBP management teams are responsible for their respective architectural design, detailed design and build life-cycle phases however they receive help for their architectural and detailed design from the BPBP team.

Figure 17 has introduced the program and its projects, needed for the M&A preparedness building, and other existing enterprise entities involved in the change effort. The relationships and interactions of involved entities, the program and its projects are mentioned to specify how each entity contributes to the life-cycle activities of other entities. It is important to consider the strategic changes caused by the M&A PBSP. Figure 18 highlights the strategic changes (i.e. dashed lines in Fig. 18.) caused by the operation of the BPBP.
Figure 18: Dynamic Business Model of M&A PBSP (Part - B)
During its operation, the BPBP team analyse the report of the RSP and then divide the tasks into three categories,

1. Tasks for the HRPBP
2. Tasks for the ISPBP
3. Tasks for the BPBP

Then BPBP project management allocates the above categories of tasks to the respective projects and initiates the execution of the tasks of the BPBP itself.

During the operation of the BPBP, the project team is mainly preoccupied with modifying business processes (discussed later in more detail) of BUs (and possibly of HQ itself). This should be done in such a way that maintains the alignment with the changes that will be made by the HRPBP and the ISPBP. The changes in the current business processes need to be supported by corresponding changes in business units as explained below. This change to business units should be made by the governing change project – the BPBP (with the participation of BU management). Therefore during its operation the BPBP will perform changes to the Requirement Specification, Architectural Design and Detailed Design of BUs, and initiate the Building of the corresponding changed structures (processes, technology and organization), however the actual release into operation will need to wait until all three components are in place (as designed and implemented by the HRPBP and ISPBP projects) and will be controlled by BU managers.

An example can be helpful to explain possible changes in the current business processes and the impact of these changes on the associated business units. For example, a change in a current business process (a loan approval business process) of the bank is discussed here. Suppose in the RSP report we found that the way business units (particularly branch managers in our case) make decisions about loan approval in a way that may require to be changed. Assume that the identified change recommends standardising the loan approval process to meet commonly agreed terms of the RBI. Now in our case, for example a separate loan approval department is one of the requirements as per the recommended norms of the RBI. Then this can cause changes in the current loan approval business process, which have impact on the activities of associated business units (BUs associated with making decisions on loan approvals). Other examples can be considered of achieving other business process characteristics (e.g. functional independency) in order to achieve flexible and agile business processes which are ready to be merged / acquired.

During the implementation of the identified changes, the BPBP management team may realise that, in order to maintain the strategic alignment in the enterprise, the strategic management has to customise current strategies to enable the M&A preparedness building. Executive Consulting Incorporation, for their Strategic Development (n.d.) competency, argue that the effective M&A implementation requires changes in existing strategy, for example an organisation may require new business and management strategies,
new operational strategies and new organisational strategies for effective implementation of M&A. Similarly, McDonald, Coulthard and Lange (2005) in their study have concluded that the M&A strategy and corporate objectives should be aligned for a successful M&A. This note is particularly important for the above arguments namely the BPBP team may suggest some changes in current corporate strategies to enable the successful preparedness building for the decided M&A type. This might include changes related to the organisational structure, the reporting system in place, the business processes or the monitoring and controlling mechanisms. These changes will then be proposed to HQ which may approve or disapprove; nevertheless HQ will reach to certain consensus that can maintain the strategic alignment between M&A strategy and corporate goals, and that of the Business, HR and IS strategy for M&A Preparedness building.

Following the achievement of strategic alignment between HQ strategy and M&A preparedness building strategy as well as BPBP objectives, it is important to model the changes caused by the HRPBP and the ISPBP and the way changes are to be made in current business processes. The operation of the HRPBP and ISPBP and a way modifications are performed in current business processes is illustrated in Fig.19.
Figure 19: Dynamic Business Model of M&A PBSP (Part - C)
Figure 19 introduces the following entities (not previously mentioned) into the dynamic business model of M&A PBSP:

- a new project entity called Business Process Flexibility Project (BPFP),
- three existing services namely Business Process Execution Service (BPES), Application Service (AS) and Information service (InfS), and
- the existing Technical Infrastructure.

The introduction of these entities is required because the operations of the HRPBP and the ISPBP may perform changes to them.

Due to the changes made in current HR policies and strategies (during the HRPBP's operation) to meet the requirements of M&A Preparedness building, Business Units’ (BUs’) current service requirements and management requirements may be changed. Therefore BUs specify their new requirements in terms of their functional, behavioural, informational or capability needs. Consequently, these changes in requirements require corresponding modifications in the BUs’ current design. Therefore the HRPBP’s operation (with the help of the BUs) updates (changes/reconsiders/…) the respective BUs’ Architectural Design and Detailed Design, and Builds (through training, hiring, and releasing into operation) the changed organisational structure – to be released into operation when the respective modifications to BUs by the BPBP and ISPBP are all ready to be integrated and released together by BU management.

The ISPBP’s operation may modify current IS system and IS processes in order to align with enterprise wide M&A preparedness building efforts. The possible changes into current IS include standardising information (including databases) and information related processes (i.e. storing, retrieving, disseminating), applications and technical infrastructure. According to the IFIP-IFAC Task Force (1999) the mentioned IS aspects (i.e. Information, Applications, Technical Infrastructure) are facilitated by an Enterprise Model Execution and Integration Services (EMEIS) (current industry terminology varies, and may call this an Enterprise Service Bus or Business Process Coordination and Orchestration service, for example). Hence three enterprise entities (each for two services and an infrastructure) can be identified as Information Services, Application Services, and Technical Infrastructure providing a harmonising platform across the organisation to access underlying resources (information, application and technical infrastructure). During M&A preparedness building, it may be necessary to clean the profiles of information services (databases) and of applications as well, so as to make them service oriented (Lawler & Howell-Barber, 2008). This effort includes to make the current IS processes and resources functionally independent, for which the ISPBP may require to change the InfS, the AS and current technical infrastructure. Hence the ISPBP re-visits the Concept, Requirement Specification, Architectural Design and Detailed Design of the InfS, AS and Technical Infrastructure. In turn the operation of the AS provides operational support to the BUs and the BPES.
As mentioned earlier, the BPBP may need to change current business processes and operations to establish M&A preparedness. The BPES provides platform and necessary support to execute business process models. Although today this may exclusively mean (procedural) workflows the future may allow more flexible process execution schemes (such as the coordination of non-procedural human executed processes).

Through the BPES the design of the business process and the actual business process execution can be made separate. Therefore in order to make any changes in current business processes, the reflective changes should first be made into the BPES through which the business process can be modified later by BUs. Hence a project called BPFP is designed to plan and make the appropriate changes in current business process design. The BPFP project is identified, conceptualised by M&A PBSP; while the BPFP team with the help of BPBP team specifies requirements and builds the architectural design. The Build and Operation life-cycle phases are covered by the BPFP team itself. During the operation, BPFP designs and implement changes in BPES to modify the design the way business processes are executed. The BUs operating the business processes requires operational support which will be provided by the BPES during its operation.

Figures 16, 17 & 18 altogether provide a complete dynamic business model showing the involved entities and their relationships to each other. This dynamic business model is helpful to explain the architectural design of the M&A PBSP and involved projects. This dynamic business model then becomes the basis for further functional modelling to show the actual activities (i.e. operation) and the sequence of involved preparedness building activities.

It will be important to work out the detail of the tasks involved and their major deliverable and milestones. The application of the research framework enables us to show the timeline of the M&A PBSP to achieve this.

Our further discussion (below) elaborates the timeline of the M&A PBSP (using an interrelated set of so called ‘life history’ diagrams) to explain the involved major tasks, deliverables and major milestones of the M&A PBSP.
5.3 The timeline of M&A Preparedness Building

The previously discussed dynamic business model of M&A PBSP allows us to develop and show the life history models of M&A PBSP. In the dynamic business model, the overall organisational structure of the M&A PBSP was mentioned; however the detail of tasks involved were not elaborated as it was not appropriate. This is due to the fact that life-cycle activities of an entity are an abstract form of the life history of that entity (IFIP-IFAC Task Force, 1999). Hence the life-cycle activities mentioned in the previous section can be elaborated in the life history models. Such life history models enable us to specify valid event space for our meta-methodology model. Hence this is the third step of the meta-methodology development process as per Weber’s (2003) explanation of theory building.

5.3.1 Life History

According to the IFIP-IFAC Task Force (1999, pg. 12) the life history of an enterprise entity is “the representation in time of tasks carried out on the particular entity during its entire life span”. Further the Task Force (ibid) highlights the usefulness of life history through the fact that such models allows us to identify the tasks pertaining to different life-cycle phases as activity types. For the problem at hand, it is important to mention in detail the tasks and activities carried out by different entities during their life time in order to mention the sequence and priority of activities as discussed in the existing literature. Further such models can be basis for further functional and implementation modelling. Therefore, Life History models can be developed which describe in detail the involved tasks and major milestones of M&A Preparedness building.

In addition, in the context of theory building exercise, this step specifies the valid event space of our theory (i.e. meta-methodology model). The life history models will specify the valid event space while the completed life history models with a complete program outline will provide the valid action space of the example based meta-methodology. The development of each stage of the life history model is the second last step of our example base meta-methodology development for M&A Preparedness building. The completion of this step will result into the final step of the theory building (i.e. example based meta-methodology development) exercise – The complete outline of M&A Preparedness Building Strategic Program. Following discussion describes in detail the life history of M&A PBSP.

5.3.2 Life History Model of the M&A PBSP

The following diagrams and accompanying text describes the life history model of M&A PBSP.
A Champion (Key Leader from HQ) identifies the need to prepare for M&As. That Champion with the help of a sponsor conduct pre-feasibility study and derive a potential strategic objective. The idea of M&A Preparedness Building is then proposed to the board of the organisation.

At this point the board approves the idea of M&A Preparedness Building through the consideration of organization's adaptability for M&A opportunity.

The sponsor with the help of the board initiates the development of a strategic management team within HQ.

The strategic management team for M&A preparedness building is established.
Starting with the life history model, the first stage of the M&A PBSP life history is shown in Fig. 20. The M&A Preparedness Building starts with an idea of getting prepared for M&A. The owner of this idea can be someone from the strategic management of the organisation (HQ). The person who provides the idea and identifies the opportunity of building preparedness is called ‘champion’. The champion then proposes the idea to someone from HQ or from the board of the organisation. The person, to whom the champion proposes the idea, should be capable to convince the board for the idea in order to get necessary approvals, is called ‘sponsor’. Therefore the champion first needs to get an approval from the sponsor.

In order to get an approval from the sponsor, the champion performs pre-feasibility study and SWOT analysis and highlights the opportunities that the idea of M&A Preparedness Building can bring to the organisation. Then the champion proposes the findings to the sponsor, who may agree with the proposed vision. It should be noted that the champion continues to find a sponsor until the idea gets a preliminary approval of the sponsor. Then the champion and the sponsor may prepare a draft plan, highlighting strategic objectives, competitive advantages and future opportunities, to propose to the board. The sponsor then proposes the plan to the board and the board may approve the idea after careful considerations; the board also agrees on the vision proposed by the draft plan. The final approval of the board on the strategic idea of the M&A Preparedness Building is 1st Milestone of the M&A Preparedness Building effort.

Following the first milestone is the establishment of a strategic management team to plan and organise the idea into a strategic program. The HQ creates a strategic management team within the HQ to design a program for M&A preparedness building. The formation of strategic management for the program design is the 2'nd Milestone of the M&A Preparedness Building effort. Later this strategic management team will become the program management team when the program proposal will be approved by the board.
Table 21: Life History Model of M&A PBSP (Stage 2)

<table>
<thead>
<tr>
<th>No</th>
<th>Mi</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>The strategic management team identifies M&amp;A PBSP and develops the concept, tasks and the master plan of the program.</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>The strategic management team have prepared the program master plan as an opportunity building program proposal including a draft of the business plan which covers the estimated time, risk and resources</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>The strategic management team submits the M&amp;A PBSP proposal to HQ.</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>The M&amp;A PBSP proposal has been approved in principle by HQ</td>
</tr>
</tbody>
</table>

Figure 21: Life History Model of M&A PBSP (Stage 2)
In Stage 2 of the life history model, a master plan of the program will be designed and approved. The strategic management team will identify and conceptualise the program which was named as M&A PBSP in section 5.2. The strategic management team will specify the mission and vision of the program.

Firstly, the strategic management team designs the policies, procedures and principles of the program. The strategic management team builds the M&A Preparedness Building strategy in this stage. The strategic management team executes SAP and TAP to design the M&A Preparedness Building strategy. As mentioned earlier in SAP operation, the strategic management team performs several strategic analyses to explore strategic choices and to make strategic decisions in order to plan the roadmap for the M&A preparedness building. Following that is the operation of the TAP during which the strategic management attempts to develop a technology strategy in alignment with the designed M&A Preparedness Building strategy. Based on the above analyses, the strategic management team derives the mission and vision of the program. In the vision statement, the strategic management highlights the major tasks that the program team should focus on. The identified mission, vision and major tasks are becomes the basis for the master plan of the program (i.e. a Program Mandate). In addition, the strategic management team estimates time, risk, efforts and resources required for the program. Based on the acquired information and approximate cost estimation, the program management team prepares a draft of the business plan. The preparation of master plan including the draft business plan is the 3<sup>rd</sup> Milestone of the M&A PBSP.

Secondly, the master plan of the M&A PBSP is formed as an opportunity building program proposal accompanied with the developed business plan. The opportunity building program proposal then proposed to the HQ to receive an approval on the program plan, structure and the approximate budget requirements. The HQ then may communicate with the management team to provide feedbacks on the master plan which later will become ‘commonly agreed upon’ master plan of the M&A PBSP. The approval of the master plan for the M&A PBSP is the 4<sup>th</sup> Milestone of the M&A PBSP. From now on the strategic management team established within HQ is allocated a program office and the team will be referred as the M&A PBSP management team.
<table>
<thead>
<tr>
<th>No</th>
<th>Mi</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>HQ establishes a supervisory board for the M&amp;A PBSP</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>The M&amp;A PBSP supervisory board has been established</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Based on the obtained approval, the M&amp;A PBSP management identifies and allocates resources including the program team</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>The M&amp;A PBSP team has been established</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>The M&amp;A PBSP team identifies the CPP and suggests a master plan including key resources.</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>The CPP team and project office established.</td>
</tr>
</tbody>
</table>

Figure 22: Life History Model of M&A PBSP (Stage 3)
In Stage 3 the M&A PBSP will design its team and initiate the operation. The operations of M&A PBSP need to be monitored for effective implementation of M&A PBSP. Hence in this stage a supervisory board will be formed.

After approving the M&A PBSP proposal, HQ needs to organise a team to oversee the progress of M&A PBSP and to provide necessary feedbacks during the M&A PBSP operation. For this purpose HQ establishes a supervisory board for the M&A PBSP within HQ. For this, HQ may have to make minor changes into its structure and daily operations. The formation of the supervisory board for the M&A PBSP is the 5'Th Milestone of the M&A PBSP life history.

On receiving the approval of master plan from the HQ, the M&A PBSP management team starts designing its team and detailed tasks. In detailed tasks design, the management team identifies the required projects and the major tasks of each project. The management team will identify required resources in order to implement the designed tasks. The successful completion of the program team formation and that of the tasks and resources allocation is the 6'Th Milestone of the M&A PBSP life history.

The next task of the M&A PBSP team is to identify the CPP, which is according to major HR researchers considered as the high priority task of M&A because the level of communication with, and participation of, employees has significant impact on the outcome of major change efforts of M&A preparedness building. Therefore the M&A PBSP management team may decide to first design the CPP and plan the major tasks of the CPP. For this activity, the M&A PBSP management team may invite HR experts of the organization. Following the identification of the CPP, M&A PBSP management team develops the CPP team. Then M&A PBSP team provides mission, vision and master plan to the project management team. The formation of the CPP is the 7'Th Milestone of the M&A PBSP life history.
The M&A PBSP team follows the master plan and build program operations.

The operations of M&A PBSP were initiated.

The CPP team identifies and allocates technological and human resources. The project activities and tasks has been designed.

The CPP operations were initiated.

Figure 23: Life History Model of M&A PBSP (Stage 4)
Figure 23 shows Stage 4 of the M&A PBSP life history. In Stage 4, the M&A PBSP team will build its operation and the CPP team will initiate its operations. The both tasks will be concurrently conducted as shown in Fig. 20. The modelling conventions for concurrent tasks are proposed in Fig. 20.

In Stage 3, the M&A PBSP team was formed and the tasks and resources were allocated to the program team. Now the program team follows the master plan and builds the operation of the program to release the program into operation. This activity mainly includes the testing of the tasks and that of the allocation of the resources. For example, the tasks identified in stage 3 may include identification of other projects. In turn during this stage, the mission and vision of identified projects are tested to ensure that the mission and vision of all the involved projects align with the overall program’s mission and vision. Similarly, key resources are checked for its availability and applicability. Building operations of M&A PBSP is the 8'Th Milestone of the M&A PBSP life history.

Concurrently with the above activities the CPP team, formed in stage 3, identifies and designs detailed tasks of the project. The detailed design of tasks and activities includes identification and planning of events, training programs, communication plans and any other activities which can enhance employees’ participation in the M&A PBSP operation. Effective execution of such activities can reduce the unexpected and unanticipated resistance during the course of the M&A PBSP. In addition, the CPP team identifies and allocates required resources and tasks to the team members. Finally, the CPP team builds the operations of the project by,

1. testing the tasks and allocation of resources
2. verifying the tasks’ alignment with the project mission and vision

The successful operation building as well as detailed task design and resource allocation is the 9'Th Milestone of the M&A PBSP life history.
No | Mi | Description
---|---|---
9  |  | The CPP operates with an aim of achieving overall organizational participation and that of reducing unexpected resistance.
10 |  | The M&A PBSP team identifies the FSP and suggests a master plan including policies and procedures.
10 |  | The FSP was established with a project management team.
11 |  | The FSP Management team creates project team and design project tasks based on the project master plan. The management team allocates resources.
11 |  | The FSP initiated.
12 |  | The FSP operates.
13 |  | The FSP team submits the Feasibility Study report to the Program office.
12 |  | The Feasibility Study report is accepted and analysed by the Program office.

Figure 24: Life History Model of M&A PBSP (Stage 5)
In Stage 5 of the M&A PBSP life history feasibility study will be conducted on M&A Preparedness building within the organisation. The study report will then be submitted to the program office will accept and analyse the submitted Feasibility Study report later.

In this stage Communication and Participation Project (CPP) starts its operation by communicating the vision of the enterprise and efforts of M&A preparedness building, across the organisation. The CPP continues its operation by executing the activities and tasks designed in Stage 4 with an aim of reducing employees’ anxiety levels, and achieving overall organisational participation for further M&A PBSP operation. During its operation, the CPP team emphasise on the supportive role of HR Management in M&A preparedness building.

Following the operation of the CPP, the M&A PBSP team identifies and establishes the Feasibility Study Project (FSP). The M&A PBSP team designs the project management team for the FSP. Further the previously identified key resources are allocated to the FSP management team. The successful establishment of the FSP is the 10'Th Milestones of the M&A PBSP life history.

Followed by the establishment of the FSP, the project management team creates the project team, designs the detailed project tasks and builds the operation of FSP. In detailed tasks design, the project management team identifies the scope and the depth of the feasibility study. This feasibility study includes the due diligence of the M&A preparedness building. As discussed in the existing literature (McDonald, Coulthard, & Lange, 2005) the due diligence plays a significant role in M&A preparedness establishment. Hence the detailed tasks design considers due diligence as suggest by Perry and Herd (2004). After designing the detailed tasks, FSP team tests the resources and task allocation as well as verifies the tasks alignment with the project master plan. The successful initiation of the FSP operation is the 11'Th Milestone of the M&A PBSP life history.

The FSP team then executes the project tasks to prepare a Feasibility Study report. At the end of the feasibility study the FSP management team reviews and finalises the Feasibility Study report prepared by the project team. This report is then submitted to the M&A PBSP office. The M&A PBSP office accepts the report and analyses the report in order to make any appropriate changes in the program planning and operation. The successful completion of the Feasibility Study report submission and analysis is the 12'Th Milestone of the M&A life history.
Based on the feasibility study report, M&A PBSP team provides operational guidelines to the CPP team.

The M&A PBSP team identifies respective projects and suggests master plan including policies and procedures.

Remaining projects were established with respective project management teams.

Respective project were identified.

Figure 25: Life History Model of M&A PBSP (Stage 6)
Stage 6 of the M&A life history is shown in Fig. 25. Stage 6 demonstrates the case of more than two concurrent activities which is usually the case in real life. In this stage, the M&A PBSP program will continue its operation to establish other six projects.

First based on the analysis of the feasibility study report, the M&A PBSP office provides operational guidelines to the CPP office. Because the previously approved project mandate for the Communication and Participation Project (CPP) might change after analysing the feasibility study report. These changes can be related to the previously anticipated resistance, efforts required and/or resources required. Hence the M&A PBSP team provides additional operational guidelines to the CPP office to notify about if any changes into the project mandate.

Followed by that, the M&A PBSP team concurrently identifies other six projects namely AISDP, TBSDP, RSP, BPBP, HRPBP and ISPBP and establishes the first four of listed projects (i.e. all other projects excepting HRPBP and ISPBP). The M&A PBSP team specifies the mission and vision as well as designs a master plan for each of the respective established projects. The M&A PBSP team designs a project management team for each of the respective established projects. Further the previously identified key resources are allocated to each of the designed project management teams. Each successful establishment of mentioned four projects (AISDP, TBSDP, RSP and BPBP) respectively represents the 13'Th to 16'Th Milestones of the M&A PBSP life history.

The M&A PBSP team only identifies the HRPBP and the ISPBP, the reason is that the Business Preparedness Building Project (BPBP) should be the governing project of HR Preparedness Building Project (HRPBP) and IS Preparedness Building Project (ISPBP) (see Section 5.2). Therefore the M&A PBSP team only provides mission and vision to the HRPBP and ISPBP. The successful identification of the HRPBP and the ISPBP represents the 17'Th and 18'Th Milestones of the M&A PBSP life history.
(The content of Figure 25 will be compressed in following figure)
Based on the feasibility study guidelines, the CPP team modifies project tasks and allocates resources.

The CPP tasks were modified.

The CPP team executes modified tasks.
In stage 7, based on the analysis of feasibility study report (conducted in stage 6), the M&A PBSP team will provide the operational guidelines to the Communication and Participation Project (CPP) team. The CPP team will modify its tasks based on the guidelines received and initiate the execution of modified tasks.

Based on the analysis of feasibility study report, the M&A PBSP team have suggested possible changes in the tasks of the CPP during Stage 6. Then the CPP team analyse proposed changes in the operations in order to modify the detailed tasks design. For example, if in the operational guidelines the M&A PBSP team have suggested that there will be more resistance than it was anticipated during Stage 3. Then the CPP team identifies the need to change the activities planned for reducing resistance. Other examples can be thought for the availability/applicability of the resources. Therefore the CPP team need to modify the detailed design of the tasks and reallocates resources to build the operation. The successful modification of the CPP tasks is the 19'Th Milestone of the M&A PBSP life history.

After building the modified tasks, the CPP team initiates the execution of modified tasks. The CPP team continues its operation in order to set an appropriate environment for the successful operations of the remaining projects.
<table>
<thead>
<tr>
<th>No</th>
<th>Mi</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>17</td>
<td>The AISDP management team establishes project team and designed detailed project tasks based on the master plan.</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>The AISDP project team is established and the identified tasks and the requested resources were allocated.</td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>The AISDP operates.</td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>The AISDP report has been generated and approved by the project management.</td>
</tr>
<tr>
<td>19</td>
<td>19</td>
<td>The AISDP team submits the AISDP report to the program office.</td>
</tr>
<tr>
<td>22</td>
<td>22</td>
<td>The AISDP Report has been accepted, verified and approved by the program office.</td>
</tr>
</tbody>
</table>

Figure 27: Life History Model of M&A PBSP (Stage 8)
In Stage 8 to 10, the requirements of M&A PBSP will be specified. In Stage 8, the requirement specification tasks will be initiated through the operation of the As-Is State Documentation Project (AISDP). In this stage, the AISDP management team (actually the M&A PBSP team, see Section 5.2) will design the detailed project tasks and build the operations. As mentioned in Section 5.2, the AISDP does not have a separate project management team at the project office instead the part of the M&A PBSP team oversees the operations of AISDP.

Based on the Feasibility Study report guidelines the M&A PBSP team determines the organisational functions which require As-Is modelling. From the expectations highlighted in the feasibility study report, these functions can be categorized as follows:

1. functions which are operating perfectly and required no change for M&A preparedness building (As-Is modelling not required)

2. functions which are operating as per current arrangements but may require total change for M&A preparedness building (As-Is modelling can’t help because it requires total change)

3. functions which require major/minor but not total change for M&A preparedness building (As-Is modelling is required)

For the first two Categories, the As-Is modelling is not required, because the components of Category 1 are functioning perfectly and are potential candidates for sharing during post-merger integration. Examples of these functions can be those which are standardised and currently providing competitive advantages to the organization. In real life, such functions attract potential buyers or sellers. For the components of the Category 2, the As-Is models can’t help because they require a completely new operational model. Hence one shouldn’t waste his/her time in developing As-Is models for the components of Category 2. Examples of Category 2 functions can be those which are functionally dependent and/or inflexible. Such as a loan approval functions. In contrast, Category 3 functions require major/minor changes in order to be prepared for M&As. An example of such functions can be those which require profile clean-ups. Therefore the tasks for the AISDP are to develop As-Is models for the organisational functions of Category 3.

Then the M&A PBSP team designs the project team and allocates the project tasks. These tasks include the specification on the level of scope and that of the detail of information to be gathered. The M&A PBSP team decides on the resources required for the project tasks and allocates the resources to the project team. The successful completion of the project team formation, the task and resources allocation is the 20Th Milestone of the M&A PBSP life history.

The AISDP team then executes the allocated tasks and develops As-Is models as specified. Along with the developed models AISDP team prepares a report of the As-Is state of the organization which can be called as AISDP report. This report will be first submitted to the project management team which accepts and approves the AISDP report. Then the project management team itself submits this report to the M&A PBSP office which
accepts and analyses the report to prepare guidelines for the TBSDP and the RSP. The acceptance of the AISDP report by the M&A PBSP office is the 21st Milestone of the M&A PBSP life history.
Based on the AISDP report, the Program office prepares and delivers guidelines for the TBSDP and the RSP respectively.

Based on the guidelines, the TBSDP management team establishes project team, designs project tasks and allocates resources.

The TBSDP project team has been established. The project tasks and requested resources were allocated.

The TBSDP operates.

The TBSDP report has been generated and approved by the project management.

The TBSDP management team submits the report to the Program office.

The TBSDP report has been accepted, verified and approved by the Program office.

Figure 28: Life History Model of M&A PBSP (Stage 9)
Based on the analysis conducted on the AISDP report during stage 8, M&A PBSP team will provide operational guidelines to the To-Be State Documentation Project (TBSDP) and the Requirement Specification Project (RSP) in Stage 9. In this stage, the To-Be models will be developed as a part of requirement specification process of the program.

Similar to the AISDP, the same part of the M&A PBSP team acts as a management team for the TBSDP, there is no separate management team for the TBSDP. This management team first decides on the scope and level of the detail required for the To-Be models. The management may decide to model either each and every functions of the organisation, or just some of the existing functions of the organization based on the AISDP report guidelines. Then the management team designs the project team based on the tasks required and allocated required resources to the designed project team. The successful establishment of the project team and the allocation of tasks and resources is the 23'rd Milestone of the M&A PBSP life history.

After that, the project team starts the execution of the project tasks by initiating the development of the To-Be Models. Similar to the AISDP, the TBSDP team prepares a report on the To-Be state of the organization. The report along with the models is then verified and approved by the project management team. The internal approval from the project management team is the 24'Th Milestone of the M&A PBSP life history.

The project management team then submits the TBSDP report to the M&A PBSP office. The M&A PBSP team then accepts and analyses the TBSDP report. The acceptance of the TBSDP report by the M&A PBSP office is the 25'Th Milestone of the M&A PBSP life history.
<table>
<thead>
<tr>
<th>No</th>
<th>Mi</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>19</td>
<td>Based on the AISDP and TBSDP reports the Program office prepares and delivers guidelines to the RSP team.</td>
</tr>
<tr>
<td>27</td>
<td>20</td>
<td>Based on these guidelines the RSP Management designs the project tasks, establishes a project team, and allocates required resources.</td>
</tr>
<tr>
<td>26</td>
<td>21</td>
<td>The RSP has been established with project team and requested resources.</td>
</tr>
<tr>
<td>28</td>
<td>22</td>
<td>The RSP operates.</td>
</tr>
<tr>
<td>27</td>
<td>23</td>
<td>The RSP report has been generated and approved by the project management.</td>
</tr>
<tr>
<td>29</td>
<td>24</td>
<td>The RSP report has been submitted to the program office.</td>
</tr>
<tr>
<td>28</td>
<td>25</td>
<td>The RSP report has been accepted, verified and approved by the program office.</td>
</tr>
</tbody>
</table>

Figure 29: Life History Model of M&A PBSP (Stage 10)
In Stage 10, the requirements list will be prepared and delivered to the program office. At the end of this stage, the program requirements will be clearly specified based on which the detailed tasks design of next projects will be done.

The M&A PBSP office had received and analysed the AISDP report (in stage 8) and the TBSDP report (in stage 9). Based on those analyses the M&A PBSP office prepares operational guidelines for the RSP and suggests those guidelines to the project management team. Unlike the AISDP and TBSDP, the RSP has its own separate management team. This management team then decides on the tasks needed to be carried out in order to prepare a list of requirements. The tasks may mainly include Gap Analysis of As-Is and To-Be state of the organization as suggested by respective reports. Therefore this project may be called as ‘GAP Analysis Project’ as well. In Gap Analysis, the major tasks would be to highlight the gap and to identify necessary tasks and resources required to fill the highlighted gaps. After designing the detailed tasks of the RSP, the RSP management team establishes the project team and allocates the resources. Then the project team builds the tasks. The successful establishment of the project team and the allocation of resources are together represents the 26Th Milestone of the M&A PBSP life history.

After building the tasks, the RSP team initiates the execution of the project tasks. During the operation, the RSP team prepares a so-called Gap Analysis report (can be referred as the RSP report) specifying the requirements of M&A PBSP. The report is internally approved by the project management team before submitting that to the M&A PBSP office. The internal approval of the RSP report is the 27Th Milestone of the M&A PBSP life history.

The management then submits the report to the program office which accepts, verifies and approves the RSP report. The RSP report approval by the M&A PBSP office is the 28Th Milestone of the M&A PBSP life history. At this milestone, the requirements of M&A PBSP are agreed upon by the program office and supervisory board. At this stage, the requirements of M&A PBSP are clearly documented.

Note: The content of Stage 7 (i.e. Figure 26) to Stage 10 (i.e. Figure 29) will be compressed in subsequent figures to allow further life history modelling.
The content of Life History Activities to be compressed (i.e. activities covered in Stage 7 to Stage 10) is highlighted
The highlighted content is compressed and will be shown similarly in subsequent figures.
Note: Highlighted lifecycle phases of five project entities (FSP, CPP, AISDP, TBSDP & RSP) need to be compressed to represent the life history of other involved enterprise entities. Highlighted five project entities will be compressed in next figure.
Note: Five Project Enterprise Entities (i.e. FSP, CPP, AISDP, TBSDP & RSP) are compressed and will be shown in similar fashion in subsequent figures.
<table>
<thead>
<tr>
<th>No</th>
<th>Mi</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>BPBP</td>
<td>The Program office sends guidelines to the BPBP about what needs to be done and recommends some modified tasks.</td>
</tr>
<tr>
<td>31</td>
<td>BPBP</td>
<td>The Program office identifies and conceptualises the BPFP.</td>
</tr>
<tr>
<td>32</td>
<td>BPBP</td>
<td>The BPBP management designs the project tasks and the team. The BPBP management allocates resources.</td>
</tr>
<tr>
<td>29</td>
<td>BPFP</td>
<td>The BPBP team and project tasks established. The operation of the BPBP were built.</td>
</tr>
<tr>
<td>33</td>
<td>BPFP</td>
<td>The BPBP operates and designs the mandate and the project management team for the BPFP.</td>
</tr>
<tr>
<td>34</td>
<td>BPFP</td>
<td>The BPFP management team designs the project tasks and allocates resources.</td>
</tr>
<tr>
<td>30</td>
<td>BPFP</td>
<td>The BPFP with its management team established.</td>
</tr>
</tbody>
</table>

**Figure 30: Life History Model of M&A PBSP (Stage 11)**
From Stage 11, the actual operation of M&A PBSP will start through which the program will make appropriate changes as identified in the RSP report. In Stage 11, the M&A PBSP will provide operational guidelines to the Business Preparedness Building Project (BPBP) based on the Requirement Specification Project (RSP) report. In turn the BPBP with the help of the M&A PBSP will establish the Business Process Flexibility Project (BPFP).

Based on the analysis performed on the RSP report during Stage 10, the M&A PBSP office will provide additional operational guidelines to the BPBP management team.

In next event, the M&A PBSP team identifies the need to create the BPFP based on the RSP report. Hence the M&A PBSP team identifies and conceptualise the BPFP. The M&A PBSP team specifies the mission and vision of the BPFP.

Thereon, the BPBP management team will identify the project tasks required of them. The main project tasks of the BPBP would be to identify necessary changes in the current business functions and management. Possible changes in management can be some changes in the current organisational structure, business strategy, and (if any) possible changes in policies and principles. The possible changes for the current functions can be to make them service oriented and functionally independent in addition to make them agile, flexible and standardised. Depending on the tasks design and requirements, the BPBP management team designs the project team and allocates the resources. After that, the project management team verifies the tasks alignment with the goals of the project and the project team builds the operations. The successful project tasks and team design is the **29'Th Milestone** of the M&A PBSP life history.

In next set of operations, the BPBP team firstly designs the project mandate and the project management team for the BPFP. This is driven by the need to provide the flexibility to the governance of the existing business processes and (if needed) to modify the existing business processes. Based on the project mandate, the BPFP management team develops the detailed designs of required project tasks. The main project tasks would be,

1) to assess the level of the flexibility in current business process and its governance
2) to identify the activities and tasks required to provide desired flexibility into the business processes and their governance
3) to execute the identified tasks and make appropriate changes into the BPES

Followed by the tasks design, the BPFP management will design the project team and allocates the required resources. Thereafter the project team builds the project operations. The successful tasks and team design as well as the resources allocation is the **30'Th Milestone** of the M&A PBSP life history.
No | Mi | Description
---|---|---
35 | The BPBP team operates and analyses the RSP report.
31 | The BPBP team has identified and categorised the required tasks for HQ, the HRPBP and the ISPBP.
36 | The BPBP team suggests required modifications (of policies, tasks, processes, organisation, etc.) to HQ. Then HQ evaluates and decides on the modifications in order to build M&A preparedness on the HQ level.
37 | HQ makes the decided modifications to its current architectural design, detailed design and implements the modified tasks.
32 | HQ had implemented the decided modifications.

Figure 31: Life History Model of M&A PBSP (Stage 12)
Stage 12 of the M&A life history is shown in Fig. 31. In this stage, the BPBP will operate and identify some modifications required into the HQ. In turn, HQ will evaluate and decide on the suggested modifications. Then HQ will make the decided improvements and implement the modified tasks.

Followed the operations building during Stage 11, the BPBP team initiates the execution of the project tasks. In the first task, the BPBP team analyses the RSP report. Based on the analysis, the BPBP team identifies the tasks required from HQ, the Human Resources Preparedness Building Project (HRPB BP) and the Information Systems Preparedness Building Project (ISPB P). The RSP report analysis and the tasks identification is the 32nd Milestone of the M&A PBSP life history.

The task identification is the responsibility of the BPBP due to the requirement of maintaining the strategic alignment (see Section 5.2, pg. 54). During the task identification the BPBP management can realise that in order to maintain the strategic alignment, some of the existing HQ level arrangements should be amended. The possible changes can be about the existing policies, tasks, processes or the organisational structure. The BPBP management then refer to the M&A PBSP management team to get an internal approval for the identified HQ level modifications. Based on the approval, the BPBP team then proposes identified modifications to the HQ.

The HQ receives the proposal from the BPBP management team. Then the HQ evaluates the modifications requested to verify the feasibility of requested modifications and the outcomes expected. Then the HQ decides on the modifications based on their feasibility. Consequently the HQ makes required changes into its architectural and detailed design to implement the decided modifications. Finally the HQ builds the operations and implements the decided modifications to establish M&A preparedness at HQ level. The successful implementation of modified tasks by the HQ is the 33rd Milestone of the M&A PBSP life history. At this stage, the M&As preparedness is established at the HQ level.

Note: To demonstrate the changes into existing BUs in the same life history model, the life-cycle phases of HQ entity will be minimised (the next figure) and the HQ entity will be represented through a single red dashed line in subsequent figures (i.e. Figure 32 onwards).
No | Mi | Description
--- | --- | ---
38 |  | The BPBP team identifies and implements necessary modifications into the tasks of BUs.
33 |  | The tasks of BUs were modified.
39 |  | The BPFP operates and identifies possible changes into the business processes and their governance. The BPFP modifies current business process models.
40 |  | In order to implement modified business processes the BPFP modifies the current BPES.
34 |  | The current BPES is modified.
41 |  | The BPES supports the BUs to execute the modified business processes.

Figure 32: Life History Model of M&A PBSP (Stage 13)
In Stage 13, the BPBP team will identify necessary changes into tasks of Business Units (Bus) in order to reflect the modifications implemented by the HQ in Stage 12. The Business Preparedness Building Project (BPBP) team will then modify the tasks of BUs. In next set of operations, the BPFP team will modify the current business processes and, to implement those modified business processes, the BPFP team will modify the current Business Process Execution Services (BPES).

Due to the modifications implemented by the HQ in Stage 12, the tasks of BUs should be changed to reflect those changes. Such changes are necessary to maintain the consistency of organisational operations. Hence during its operation, the BPBP team will identify required changes for BUs. Then the BPBP team itself will make those modifications into the design of tasks and allocated resources of BUs. The successful implementation of business unit level changes is the 33’rd Milestone of the M&A PBSP life history.

Meanwhile, the Business Process Flexibility Project (BPFP) team identifies the required changes into the business processes and their governance. Such changes are necessary in order to integrate business processes during M&A implementation. Therefore the BPFP team identifies potential changes into the current business processes and its governance. Then the BPFP team makes the identified changes into current business processes models (e.g. functional models).

In order to implement the modified process models, firstly, the underlying platform (i.e. a harmonised enterprise wide platform which provides support for the business process execution) should be changed. In order to change such platform, we need to modify the BPES. As mentioned in section 5.1, the BPES is an enterprise service entity providing services to other enterprise entities. Hence we required to change the current BPES tasks to implement identified modifications of business processes. Therefore the BPFP changes the requirements, design and operations of the BPES. The successful modifications of the BPES represent the 34’Th Milestone of the M&A PBSP life history. Consequently, the BPES will provide operational support to BUs of the organisation in order to implement the modified business processes. At this stage, the business processes were successfully modified in the course of M&A preparedness building; in other words, the M&A preparedness is established at the business process level.
The BPBP team allocates the requirements and the project tasks to the HRPBP and ISPBP respectively. The management teams of each of the respective projects initiate their operations.

The project mandate was designed for the HRPBP.

The project mandate was designed for the ISPBP.

The respective project management teams design their project teams and allocate resources.

The operations of the HRPBP were built.

The operations of the ISPBP were built.
In stage 14 of the M&A life history, two of the previously identified projects namely the Human Resources Preparedness Building Project (HRPBP) and the Information Systems Preparedness Building Project (ISPBP) will be initiated. These two projects are the final projects of the M&A life history. Here in this stage, both projects will be established with their respective project mandates, project teams and required resources.

In Stage 12, the BPBP had identified tasks for HQ, the HRPBP and the ISPBP. The execution of the tasks for the HQ was completed. Now, in this stage, the BPBP team with an approval from the M&A PBSP team establishes the project management teams for the HRPBP and the ISPBP. The BPBP team specifies the project mandate (clear requirements in terms of what is expected from them) for each of the projects. The key requirement for the HRPBP and the ISPBP may be to maintain the strategic alignment with the M&A strategy and the overall business and organisational strategy. Additional requirements can be specified from the gaps identified in the RSP report.

Based on the specified requirements, the BPBP suggests key tasks for both of the projects. Examples of the HR tasks can be,

1) To redesign HR strategy
2) To assess HR portfolio (i.e. HR policies, functions, processes, activities, etc.)
3) To achieve the To-Be state for the overall HR portfolio as specified by the TBSDP

Examples of the IS tasks can be,

1) To redesign IS strategy
2) To assess the IS portfolio (i.e. IS functions, processes, applications, databases, etc.)
3) To achieve the To-Be state for the overall IS portfolio as specified by the TBSDP

The completed requirement specification and design of key tasks develops the complete project mandate for both the HRPBP and the ISPBP respectively. Then the BPBP team allocates the project mandates to the respective management teams of the HRPBP and the ISPBP. The successful allocation of the project mandates to the management teams of both projects respectively represents the 35'Th and 36'Th Milestones of the M&A PBSP life history.

Then the respective project management teams designs the detailed project tasks which enable them to achieve the requirements specified in the project mandate. The detailed tasks design includes the project specific tasks design. For example, the detailed tasks of the HRPBP may include,

1) To perform Cultural assessment (Schuler & Jackson)
2) To conduct thorough due diligence in all areas (Schuler & Jackson)
3) To prepare HR functions and their members psychologically and strategically for their role (Marks & Vansteenkiste, 2008)
4) To design cut-offs, retention strategies (Aguilera & Dencker, 2004)

Similarly, the example detailed tasks of the ISPBP can be,

1 To plan and configure IS integration options
2 To clean profiles of the IS functions, applications and databases currently being used
3 To configure IS functions in order to make them flexible and agile
4 To plan the integration of databases and applications
5 To standardise IS processes

Followed by the detailed tasks design, the respective project management teams of both projects designs their project team as well as identifies and allocates required resources. Then each respective project team builds their operations. The successful operation building of the HRPBP and the ISPBP represents the 37'Th Milestone and 38'Th Milestone, of the M&A PBSP life history, respectively.

**Note:** The life history activities covered in Stage 11 to Stage 14 will be compressed to demonstrate further life history activities of the M&A PBSP. The content to be compressed is shown in next figure.
The ISPBP team identifies possible changes into the AS, the InfS and the technical infrastructure. The ISPBP team implements identified changes into respective enterprise entities.

39 The current AS is modified.
40 The current InfS is modified.
41 The current technical infrastructure is modified.
45 The modified AS provides operational support to the BPES.
46 The modified AS provides operational support to BUs.
In Stage 15, the M&A preparedness will be built at the IS level. During this stage, the Information Systems Preparedness Building Project (ISPBP) will execute the tasks identified during Stage 14. The ISPBP will modify current Application Service (AS), Information Services (InfS) and technical infrastructure in order to achieve the To-Be state for the IS portfolio.

Firstly, the ISPBP team identifies and implements necessary changes into the AS. The changes into the existing AS can be, to modify the applications itself, to modify just the user interfaces, to make applications service oriented, to clean up their profiles or just to change the existing architecture. Such changes required in order to reflect the changes previously made to the business processes and the IS strategy. The BPBP then may modify the concepts, requirements and design of the existing AS. The successful modifications of the current AS represent the 39th Milestone of the M&A PBSP life history.

Secondly, the ISPBP team identifies and implements necessary changes to the InfS. The InfS represents organisation’s resources used to store information (e.g. databases) and services providing access to those resources. In order to build preparedness at IS level the InfS may require to be changed. The reasons for such changes can be poor quality (e.g. information duplication, inferior consistency) of the information stored or poor mechanisms for information maintenance / retrieval. Sometimes the complexity of access to the stored information can be a reason to improve current InfS. Therefore, the ISPBP executes identified modifications of the InfS. The successful modifications of the InfS represent the 40th Milestone of the M&A PBSP life history.

Finally, in order to support the modification made in the current AS and InfS, the ISPBP team may identify that the current technical infrastructure may need to be changed. The technical infrastructure includes any software (e.g. operating systems, security software) or hardware (e.g. computers, network components) used to support organisational functions. The ISPBP will identify necessary changes required to be made in the current Technical Infrastructure. This is to make sure that the organisation has the right technological resources to support the established M&A preparedness. The successful modifications of the Technical Infrastructure represent the 41st Milestone of the M&A life history.

Then, the modified AS provides operational support to the BPES and BUs. This is required because the possible changes made into the applications should be consistent with the modified business processes. Hence the AS provides support to the BPES and BUs in order to execute the modified AS.

At this stage, the M&A preparedness is established at the IS level.
No Mi Description

47 BUs identify potential changes in their requirements and tasks. BUs specify new requirements due to the fact of changes previous changes.

42 Requirements of BUs were specified.

48 The HRPBP team analyses the specified requirements as well as identifies and implements potential changes in tasks design and operations of BUs.

43 BUs are modified.

Figure 35: Life History Model of M&A PBSP (Stage 16)
The final stage – Stage 16 of the M&A life history is shown in Fig. 35. In this stage the HR preparedness will be established through the combined efforts of the HRPBP and BU.

Due to the changes made in current business processes, AS, InfS and Technical Infrastructure, the requirements of BU may be changed. Therefore BU identifies changes in the requirements (i.e. what needs to be done) and the needs (human and non-human resources, skills, etc.) to complete their tasks. BU may specify a need to provide training programs to effectively adapt new changes in order to fulfil the tasks specified. It should be noted that BU includes individual or group of employees, external stakeholders including if any suppliers. The successful requirement specification of BU represents the 42\textsuperscript{nd} Milestone of the M&A PBSP life history.

Based on the specified requirements of BU, the HRPBP executes its specified tasks to help BU prepare for M&As. During its operation, the HRPBP support BU to adopt new changes introduced in the organisation and to prepare each of the BU for the M&As. In addition to providing support to BU, the HRPBP documents and standardises the HR policies, processes and functions. Further the HRPBP team develops the documentation of role descriptions, cut-offs and retention strategies, in order to plan for their role in future M&A. Mentioned activities may change the way currently BU operate therefore the HRPBP modifies the tasks design and operations of current BU. Then BU continues its modified operation in order to maintain the M&A preparedness. The successful modification of BU’s tasks design and operation represent the last – 43\textsuperscript{rd} Milestone of the M&A PBSP life history.

With this milestone the M&A preparedness is established at the HR level.

Stage 1 to 16 together, shows stage by stage M&A preparedness building for our example case. It is possible to demonstrate the customised activities. However, this preparedness building timeline is prepared from the identified M&A issues. One can build similar model for their organisation or can use this model as a checklist to verify the involvement of all major M&A issues which usually causes the failure.

The discussion of previous Sections namely 5.1, 5.2 and 5.3 can be summarised to prepare a complete program outline highlighting the identified enterprise entities, their major tasks, milestones and expected outcomes. Such program outline can serve as a checklist and a guide for designing an M&A preparedness building program.
5.4 Summary of the M&A Preparedness Building

The summary (often referred as a program outline) of the M&A preparedness building can be developed by synthesizing the discussion of Sections 5.1, 5.2 and 5.3. This summary is represented in a tabular format highlighting the activities described in the above sections. Further the program outline specifies the valid action space as it highlights major enterprise entities, their tasks, milestones and expected outcomes. Hence this is the last step of the meta-methodology (our theory development), as per Weber’s (2003) explanation of theory building process. Here, the table is broken down into three parts to maintain readability. The following three tables provide the summary of the M&A Preparedness Building.
<table>
<thead>
<tr>
<th>Project / Program Name</th>
<th>Involved Key Tasks</th>
<th>Milestones</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 M&amp;A Preparedness Program</td>
<td><strong>Strategic Analysis Project</strong>&lt;br&gt;Perform strategic analysis and derive targeted M&amp;A option. Design strategies, policies and principles needed for the M&amp;A program.&lt;br&gt;<strong>Technology Analysis Project</strong>&lt;br&gt;Perform technology analysis and help strategic analysis project.&lt;br&gt;<strong>Coordination</strong>&lt;br&gt;Coordinate involved projects and their tasks&lt;br&gt;<strong>Preparedness Maintenance</strong>&lt;br&gt;Analyse any required changes (i.e. new recruitment, introduction of new resource, process or function)&lt;br&gt;Consider the impact on built M&amp;A preparedness before implementing any new changes&lt;br&gt;Reflect any necessary changes made to current organizational state in relevant documents and models.</td>
<td>Strategic Analysis report delivered</td>
<td>M&amp;A preparedness building program effectively initiated, implemented and continues operating successfully.</td>
</tr>
<tr>
<td>2 Feasibility Study Project</td>
<td><strong>Due Diligence</strong>&lt;br&gt;Estimate cost, time, effort and resources, Estimate resistance, Identify potential and realistic outcomes</td>
<td>Cost, time, effort, resources and resistance estimated&lt;br&gt;Realistic Program outcomes identified</td>
<td>Estimation Report and Confirmed Program Outcomes</td>
</tr>
<tr>
<td>3 Communication and Participation Project</td>
<td><strong>Communicate key decisions through to ground level staff</strong>&lt;br&gt;Lessen resistance, anxiety and rumors during the program proceedings through effective top-down communication&lt;br&gt;Enable participation from each level of the organization</td>
<td>Effective communication provisions made to provide enough information on Program Proceedings&lt;br&gt;Impact of this top-down communication is monitored and improved&lt;br&gt;Activities put in place to achieve overall participation for M&amp;A preparedness</td>
<td>Employee concerns, anxiety and level of resistance gradually decreased&lt;br&gt;Overall Participation achieved&lt;br&gt;Note: This project is ongoing and can /should continue till the post-merger integration achieved</td>
</tr>
</tbody>
</table>
Table 7: M&A Preparedness Building Strategic Program (M&A PBSP) Part (b)

<table>
<thead>
<tr>
<th>Project / Program Name</th>
<th>Involved Key Tasks</th>
<th>Milestones</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>As-Is Organizational State Documentation Project</td>
<td>Identify the level of detail required for required As-Is information Identify activities and processes through which As-Is information can be gathered Collect and Document As-Is information Develop As-Is organizational models</td>
<td>Activities planned in order to collect As-Is Information As-Is information collected, documented and modelled</td>
<td>As-Is Information models and documentation</td>
</tr>
<tr>
<td>To-Be organizational State documentation Project</td>
<td>Prepare To-Be organizational state based on expected outcomes and requirements Propose To-Be state of organization through models and documentations</td>
<td>To-Be activities and processes identified To-Be models and documentation proposed</td>
<td>To-Be Information models and documentation</td>
</tr>
<tr>
<td>Requirement Specification Project (Gap Analysis)</td>
<td>Identify and document requirements (i.e. related to resources, processes, information) to be fulfilled in order to achieve To-Be organisational state</td>
<td>All major requirements identified</td>
<td>Requirement Specification Report</td>
</tr>
</tbody>
</table>
Table 8: M&A Preparedness Building Strategic Program (M&A PBSP) Part (c)

<table>
<thead>
<tr>
<th>Project / Program Name</th>
<th>Involved Key Tasks</th>
<th>Milestones</th>
<th>Expected Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Business Preparedness building project</td>
<td>Design a Coherent integration strategy Prepare for overall organizational integration to the required level Define business processes (incl. mgmt./decision making), functions, and information</td>
<td>Business strategies designed and are aligned with M&amp;A program strategies Preparedness building Master plan prepared for Business, IT and HR domain based on the Gap analysis and guiding program policies and principles</td>
<td>Business domain Master Plan for 'anytime M&amp;A'</td>
</tr>
<tr>
<td>8 HR Preparedness building project</td>
<td>Document As-Is information such as role definitions, job types (skills needed, salary levels,...) for each of the roles in the organization; Strategically plan HR concerns such as retentions and cut-offs; salary expectations; job reliability; work load; productivity Train effectively in order to prepare each employee for M&amp;A Roll out modified processes</td>
<td>HR and skills needed to run this organisation is identified and documented Possible cut-offs and retentions options considered and planned Required skills and resources hired or (re)trained HR domain meets To-be models and documents Modified processes in place</td>
<td>HR &amp; process domain of the Master Plan is implemented Plan(s) for HR &amp; process integration of anticipated M&amp;A project(s) are available</td>
</tr>
<tr>
<td>9 Information Systems (IS) Preparedness building Project</td>
<td>Specify IS strategies Identify, consider and configure possible IS integration options. Standardise IS processes and functions. Plan Technology, Application and Database integration.</td>
<td>IS strategies configured Possible IS integration including information integration options considered and configured Required skills and resources are identified IS domain meets To-be models and documents</td>
<td>IS domain of the Master Plan is implemented Plan(s), for IS integration of anticipated M&amp;A project(s), are available</td>
</tr>
</tbody>
</table>
6 Conclusion and Future Work

This research explores the role of EA in M&A processes which normally include complex change activities. We found that EA can play an role in the M&A process, namely by helping management build a comprehensive M&A preparedness which is a preventative as well as opportunity creating measure that could have a positive effect on the most significant factor causing high failure rate. This preparedness building activity is proposed as a remedy to the lack of sufficient post-merger integration planning, part of which may be due to the time constraints when merger has already been decided. While opportunity creation has not been discussed in detail, the design for flexibility or agility could certainly open the opportunity for previously infeasible M&As.

In order to prepare an example based meta-methodology, to propose the role of EA in M&A preparedness building, regular and peculiar M&A issues were highlighted from the existing literature of diverse disciplines such as Business and Management, HR, IS and change management. Gaps in theory and practice and the contradicting arguments of researchers and practitioners were highlighted to encourage the proposition of a new way to address high failure rate.

The new way was identified as building preparedness for M&As well in advance so that whenever M&A deal is signed, the organisation will already have a post-merger integration ready state. Then based on the list of issues identified, an example based four step meta-methodology was proposed including example models to demonstrate how an enterprise could achieve M&A preparedness and how EA can support the planning of such efforts.

The developed example based meta-methodology covers
1) major issues identified by the literature,
2) major viewpoints as mentioned by the literature,
3) comprehensive (including Business and Management, HR and IS) M&A preparedness building activities (programs and projects)

The meta-methodology can be taken as a reference model as well, which management can utilize for defining organisation-specific M&A preparedness building tasks. This research outcome is aimed to contribute to M&A theory and practice and aimed to provide a new way to look at the reasons for the current high failure rate.

Based on the above summary of the research work discussed in Sections 1 to 5, the following discussion firstly draws conclusions of the research and secondly identifies opportunities for future research that emerged from this work.

6.1 Conclusion

The major conclusion of this study is that EA practice can play a significant role in M&A preparedness building. The proposed role of EA practice was demonstrated through an example based meta-methodology, which can support higher management in building preparedness for the banking industry’s M&As. Based on the decisions made by the strategic management on the type of a M&As they wish to be
prepared for, this example based meta-methodology could be used to support strategic management in their M&A preparedness building endeavours.

On the high level, the meta-methodology can be thought of as a step-by-step process:

- **First Step:** identify the enterprise entities and their tasks,
- **Second Step:** define the relationships of those entities, their contributions to other entities’ lives and their roles in the change that leads to the desired preparedness for future possible M&As,
- **Third Step:** demonstrate the timeline and relative sequence of the transformation tasks involved,

Thus being instrumental, the above steps led to preparing a program outline (covering the specification of relevant enterprise entities, their tasks, the major milestones and the expected outcomes).

A strategic program (namely M&A PBSP) has been proposed to establish M&A preparedness and to address all the issues identified by the literature. The outcome of this program is that the enterprise is transformed into a state characterised by systemic properties that make the desired types of M&As easier to achieve, and as a result quicker and less risky to plan.

Below is a discussion how this work has answered the research questions discussed in Section 2.3 (and highlighted in *italics* below):

- **Firstly,** the developed example based meta-methodology for M&A preparedness building has demonstrated a way to consider important issues highlighted in the existing literature. The proposed meta-methodology describes *what needs to be considered and how to determine the type (and level) of preparedness to be built*. Specifically, the Strategic Analysis Project (SAP) and the Technology Analysis Project (TAP) projects involve the tasks required to *design, or confirm an M&A strategy*.

- **Secondly,** the meta-methodology allows us to identify the detailed tasks of involved enterprise entities (Section 5.1.2). This particular discussion identifies *the actions need to be taken to achieve preparedness for the desirable, or decided, M&A types*.

- **Finally,** the second and third steps of the meta-methodology enable us to demonstrate:
  1) the relationships of involved enterprise entities in their respective evolution,
  2) their contribution to other entities’ lives (i.e. to their change),
  3) their roles in the change efforts involved,
  4) the timeline and relative sequence of the involved processes performed by each of the enterprise entities

To demonstrate how to perform the above, the dynamic business models and the life history models of the M&A PBSP were developed.

Based on the first, second and third steps of the meta-methodology a complete program outline was prepared that highlighted the involved enterprise entities, their major tasks, milestones and expected
Building Preparedness for M&As: The Role of Enterprise Architecture Practice

outcomes, and together answer the question: how to organize an M&A preparedness program and project(s).

We are well aware that the followed method is inductive in nature, thus even though the premises (the findings of literature) can be taken as valid and verified, the new synthesis is more than the sum of its components and therefore further validation and verification of our results will have to be planned for in the future.

6.2 Rigor, Validity and Reliability

In order to produce an effective model for M&A preparedness the research process should be rigorously designed and followed. Further, the arguments made should maintain a logical flow in such a way that anyone can follow and understand the need and use of the model. In this research, the model development was based on (1) the data collected from the existing literature and (2) the research framework which provides a logical flow for the model development. Further a meta-methodology for the model development was adopted (Noran (2008)) for this research. Through this methodology a consistent model development process can be designed and followed (whereupon the resulting ‘model’ represents the organization-specific M&A preparedness building methodology). In addition the outcome of the research can be considered a theory (see Section 4.1.2), therefore a theory building process suggested by Weber (2003) was followed to provide a logical flow to the example based meta-methodology building. The described research design (see Section 4) was followed during the project to achieve rigor in the research outcome. Further, to avoid errors and ambiguities, internal validity was maintained for the concepts used in the research. The discussion below elaborates the internal validity of this research.

According to McMurray, Pace and Scott (2004)’s explanation of validity, ‘validity of the research’ refers to two types of validity: internal and external. Internal validity means constructs used in the research are commonly understood, or made explicitly clear and refer to existing definitions or meanings (for example the term “preparedness”). In this research, all important terms were defined wherever appropriate and any new concepts were clearly explained wherever required throughout the report. This can help the user of the research outcome being used in the same way as it was intended. Such internal validity minimizes the chance of ambiguity and misunderstanding. The researcher tried to maintain a clear relationship between the constructs used in the research presented and the constructs generally used in the practice (e.g. external practice uses the term life-cycle in two different meanings, whereupon this research needed to distinguish between the two, namely life cycle and life history according to the research framework). External validity refers to the validation by external sources such as validation of the model by industry experts or by case studies. We have used a Conceptual Analytical research method, in which external validity is not covered (Jarvinen, 2004), therefore as mentioned above we identified a future plan for the external validation of the research outcome (as discussed in Section 6.3). The Reliability of the research is discussed below.

Reliability can be considered from three different viewpoints: Completeness, Accuracy and Repeatability of the research outcome. The completeness of this research outcome is ensured through the completeness of GERAM modelling framework. In GERA Modelling framework (See Section 3.2), the completeness of
the scope of transformation was highlighted by the IFIP-IFAC task force (1999). The views of GERA’s modelling framework are organised in such a way that all decompositions (based on various modelling views, i.e. software or hardware, human or machines) can be combined to represent the complete scope of the transformation. For example, the subdivision according to means of implementation has two categories: Human and Machines. According to the IFIP IFAC task force (1999) this view is decomposed by categorising humans and all other sources which are non-humans (i.e. machines- can be anything a computer, a robot, or any other production machinery). Hence the research outcome (based on GERA and GERAM) is complete. For this research, the research approach was positivist. Further the selected research framework is also objective in nature. The concrete example based meta-methodology was developed on firm grounds of the selected research framework, the model development meta-methodology, and the selected research method. Therefore the accuracy was ensured by making the logical reasoning process (modelling of M&A preparedness building) accurate, though the further external validation can highlight (if any) incorrectness of the outcome. Finally the repeatability was ensured through following facts which were considered during the modelling:

1) The application of commonly shared categories of issues: IS, HR, and Business & Management, that each M&A must address.

2) The development of Dynamic Business Models (see Section 5.2) and the plan of transformation (i.e. the life history diagrams – see Section 5.3) are based on a uniformed pattern of GERA lifecycle which applied to every single involved entities.

Therefore it can be expected that the meta-methodology applied in same / similar situation will provide same / similar methodology (e.g. applications of GERAM to other problems exist providing similar methodology, Molina & Carrasco, 2003; Tølle, Bernus, & Vesterager 2002; Noran, 2010; Noran 2008). Therefore the completeness, accuracy and repeatability effectively triangulate the finding and increase the expectation that the methodology is reliable.

It should be noted that the research outcome is the demonstration (of how to incorporate EA practice into the M&A preparedness building) not a generic meta-methodology itself. Hence this example based meta-methodology can be considered as a reference model to guide and to support one’s own M&A preparedness building efforts.

Though our result can provide an insight into the role of EA practice in M&As, a number of questions will need to be answered in the future for the result to be confidently used in practice (see Section 6.3, ‘Future Work’).

6.3 Future Work

Further research is required to explore and to externally validate the applicability of the developed meta-methodology as the meta-methodology’s external validation was not part of this research; Jarvinen (2004) suggests that the Conceptual-Analytical research method aims to synthesise existing concepts in order to propose a theory, and this was the purpose of the present thesis. However, further research must investigate:
(1) Is it possible to apply such meta-methodology in real life?
   a) How is it possible to optimise the efforts required for M&A preparedness building?
   b) How is it possible to demonstrate the relationship between the types of business models
      traditionally considered by top level management for M&A decisions and the models used by
      the proposed preparedness building meta-methodology?

(2) If the answer to (1) is yes, how to validate in practice the contribution of such meta-methodology in
    M&As?

These questions suggest research tasks that will explore the effectiveness and practical applicability of the
proposed meta-methodology. That is, the outcome of the present Conceptual-Analytical research could
(for example) be followed by Action research or by using a Design Science research method, in order to
address the questions above.

Perhaps such future research can include other elements of scientific methods such as null hypothesis. It
means a possible future research can consider different case studies to validate the effectiveness and
necessity of the research outcome. We can use two different case studies: one which involves the use of
the proposed methodology and the other which doesn’t. Then in the research the former case study can be
used to investigate that without the use of such methodology would the outcome be same or different. On
the contrary, the latter case study (i.e. without using the methodology) can be used to investigate whether
the use of such methodology could have improved the outcome or not. Based on the findings from both
investigations we can highlight the effectiveness and necessity of the proposed example based meta-
methodology. If we can demonstrate the effectiveness of this research outcome through mentioned null
hypothesis, it directly provides a value proposition to the methodology.
7 References


Appendix A: Ethical Clearance

Griffith University Animal Ethics Committee / Griffith University Human Research Ethics Committee

Project Title
Building Preparedness for M&As: The role of EA practice

Applicant
Nilesh VANIYA

Completed the Griffith University Research Ethics Scope Checker on 1 August 2010. In completing the checker they indicated:

1. About or involving humans? No

On this basis the described activity is outside the scope of the University's animal ethics and human research ethics arrangements, and as such does not require University ethical review.

This is a service maintained by the Office of Research on behalf of AEC and HREC.