

Table of contents

1. Introduction	1
1.1 Situation and problems to be analysed	1
1.2 Structure and objectives of this dissertation	8
2. Definition and differentiation of relevant terms	11
2.1 Merger and Acquisition	11
2.1.1 Definition Merger and Acquisition	11
2.1.2 Differentiation to other forms of corporate combinations	16
2.1.3 Objectives of mergers	18
2.1.4 Different forms of mergers from a strategic point of view	22
2.1.5 Different phases of mergers	25
2.2 Information Systems and IS Integration	36
2.2.1 Definition Information Systems	36
2.2.1.1 Components of Information Systems	37
2.2.1.2 Business Processes to be supported or executed	39
2.2.1.3 Transformation of data into information	41
2.2.1.4 Classification of Information Systems	44
2.2.2 Definition Integration and IS Integration	45
2.2.2.1 IS integration objects	49
2.2.2.2 Integration direction	50
2.2.2.3 Integration reach	50
2.2.2.4 Degree of automation	50
2.2.3 Differentiation of IS vs. IT Strategy and IS vs. IT Architecture	51
2.2.4 Definition IS Integration Strategy	55
2.2.5 Elaboration of other relevant IS terms	56
3 Effects of mergers on organizations	59
3.1 Merger integration strategies and related levels of integration	60
3.1.1 Description of M&A contextual factors	62
3.1.1.1 Organizational size differences	62
3.1.1.2 Profitability and “quality” of the merger partners	65

3.1.1.3 Differences in organizational maturity	67
3.1.1.4 Differences of organizational structures	67
3.1.1.5 Cultural differences, cultural compatibility and degree of multiculturalism	69
3.1.1.6 Compatibility of acquisition visions between the merger partners	77
3.1.1.7 Political characteristics	77
3.1.1.8 Synergies and the functional areas in which they shall be achieved	78
3.1.1.9 Similarity of product-market segments between the merging organizations	78
3.1.2 Summary of findings regarding integration level recommendations	79
3.1.3 Description of main M&A integration strategies	81
3.2 Organizational and information effects of mergers	85
3.2.1 Organizational restructuring	85
3.2.2 Business process integration, harmonization and standardization	89
3.2.2.1 Business process harmonization or consolidation	89
3.2.2.2 Business process standardization	92
3.2.2.3 Business process integration	94
3.2.3 Cultural and employee integration	99
3.2.3.1 General culture concepts	100
3.2.3.2 National cultures and corporate cultures	101
3.2.3.3 Findings regarding national culture differences	103
3.2.3.4 Findings regarding corporate culture differences	106
3.2.3.5 Cultural integration as major type of acculturation	109
3.2.3.6 Means to support cultural and employee integration	113
3.2.4 Information Systems Integration	118
3.2.4.1 Strategic decision model regarding IS integration by Giacomazzi et al. (1997)	120
3.2.4.2 Strategic decision model regarding IS integration by Wijnhoven et al. (2006)	123
4. Concepts and technologies for the IT-related IS integration areas	127
4.1 Hardware, network and communication integration	127
4.1.1 Network technologies	129
4.1.2 Protocols	130
4.1.3 Summary of hardware and network integration within M&As	132
4.1.4 (New forms of) Communication integration	134
4.2 Data integration	137
4.2.1 Process-oriented data integration	140

4.2.2 Model-oriented data integration	141
4.2.3 Summary of (traditional) data integration within M&As	145
4.2.4 New (semantic) standards to facilitate data integration	147
4.3 Application integration	150
4.3.1 Point-to-point integration	152
4.3.2 ERP systems within application integration	153
4.3.3 Enterprise Application Integration (EAI)	155
4.3.4 Front-End-Integration	158
4.3.5 Summary of (traditional) application integration approaches within M&As	159
4.3.6 Web Services and Service Oriented Architecture	161
4.3.6.1 Definition of Service-Oriented Architecture (SOA)	161
4.3.6.2 Definition, elements & characteristics of Web Services and Enterprise Services	165
4.3.6.3 Service Orchestration and flow modelling languages	169
4.3.6.4 Web Services and EAI	170
4.3.6.5 Main benefits of a Service-Oriented Architecture	172
4.3.6.6 Main weak-points and potential risks of a service-oriented architecture	175
4.3.6.7 Excursion: Semantic SOA and Semantic Web Services	180
4.3.6.8 SOA and M&A / Divestitures – current findings in the academic literature	182
5. Findings on mergers and IS integration	185
5.1 Results of selected merger-related studies and investigations	186
5.1.1. Selected findings of the scientific research study of Jansen (2004)	186
5.1.2. Selected findings of research studies from consulting companies	192
5.1.3. M&A integration strategy-specific success factors	197
5.2 Differences between a M&A-related and a “standard” company-internal IS integration	198
6. Description of the empirical research framework	203
6.1 Issues to be investigated within the empirical research part	203
6.2 Description of the case study method	204
7. Meta-analysis of M&A success & failure factors and related IS support	211
7.1 M&A and IS-related success factors and failure sources	211
7.2 Derivation of potential IS-related possibilities to support selected M&A success and failure factors for the analysis within the empirical case studies	224

8. Method development to determine the IS integration strategy	227
8.1. Derivation of the major functional IS requirements from the business strategy	228
8.1.1 Development of a joint understanding of the business strategy of the merged company between business and IS professionals	228
8.1.2 Derivation of impact from (new) business strategy on business processes	232
8.1.2.1 Identification of business processes most impacted by the M&A and the (new) post-merger business strategy	233
8.1.2.2 Derivation of requirements from the post-merger business strategy on the processes	233
8.1.3 Derivation of requirements from business strategy and business processes on IS	236
8.2 Analysis of the company's own Information Systems	243
8.2.1 Analysis of characteristics of the company's IS by focusing on the IS areas and derived IS requirements identified as particularly relevant	244
8.2.2 Derivation of first conclusions regarding the strategic and operational post-merger IS integration	247
8.3 IS due diligence	250
8.3.1 Analysis of characteristics of the IS of the potential merger candidate	250
8.3.2 Identification of potential risks for the IS integration and the post-merger IS	255
8.4 Evaluation and determination of the IS integration strategy	257
8.4.1 The role of the M&A integration strategy	258
8.4.2 Approaches to determine the IS integration strategy	261
8.4.2.1 Top-Down approach	263
8.4.2.2 Bottom-up approach	264
8.4.2.3 Advantages of the two-fold approach and dominance of the business aspects	265
8.4.3 Analysis and decision-making activities for the determination of the IS integration strategy	267
8.4.3.1 Challenging of strategic IS integration recommendation prescribed by M&A integration strategy (if applicable)	269
8.4.3.2 Derivation of implications regarding the IS integration level from (weighted) M&A & business objectives under consideration of M&A contextual factors	272
8.4.3.3 Matching of general process / IS requirements against recommended IS integration level and deriving IS integration implications from process / IS requirements	278
8.4.3.3.1 Identification of likely "violations" of IS-related M&A success factors (opt.)	281
8.4.3.4 Deriving a general IS integration method (top-down)	283

8.4.3.5 Determination / verification of the IS integration level & general integration method by considering exist. process / IS characteristics and M&A success factors	283
8.4.3.5.1 Overview of IS- and process-related aspects to be potentially evaluated	284
8.4.3.5.2 “Full-scope analysis” approach	286
8.4.3.5.3 “Pre-defined analysis” approach	296
8.4.3.6 Adjustment of recommended IS integration level and IS integration method on basis of the existing IS characteristics (if applicable)	301
8.4.3.7 Concrete IS integration methods & support of IS-related M&A success factors	302
8.4.4 Detailed evaluation of the process and IS characteristics in the course of the bottom-up analysis	303
8.4.4.1 Support of Business Strategy	304
8.4.4.2 Support of Process Requirements	308
8.4.4.3 Data and Information evaluation	312
8.4.4.4 Technical IS features	321
8.4.4.5 IS usability	322
8.4.4.6 Risk and security aspects	324
8.4.4.7 Costs	324
8.4.4.8 IS users	328
8.4.4.9 Summary of the main IS-related characteristics to be evaluated	330
8.4.5 Enhancement of the decision support model of Wijnhoven et al. (2006)	331
8.4.6 IS-related possibilities to support typical M&A success factors	336
8.4.6.1 Identification of the likely “violations” of IS-related M&A success factors in the context of the IS integration strategy determination	336
8.4.6.2 IS-related possibilities to support M&A success factors when determining / designing the <i>concrete</i> IS integration methods	342
8.4.6.2.1 Determination and design of the concrete data integration	342
8.4.6.2.2 Data integration-related IS possibilities to support M&A success factors and the employee integration	345
8.4.6.2.3 Determination and design of the concrete process and application integration	352
8.4.6.2.4 Process and application integration-related IS possibilities to support M&A success factors and the integration of employees	357

9. Results and discussion	365
9.1 Presentation of case study results	372
9.1.1 Results of analysed IS aspects in regard to <i>general M&A and post-merger IS integration issues</i>	373
9.1.1.1 Degree of IS involvement	373
9.1.1.2 Consideration of IS-related aspects within the due diligence	378
9.1.1.3 Prioritization aspects of IS integration measures	383
9.1.1.4 Technical and IS integration challenges	385
9.1.1.5 Most successful IS integration measures / aspects	388
9.1.1.6 SOA-related aspects in the course of M&As	390
9.1.2 Results regarding the stage-specific, weighted relevance of the decision aspects of the enhanced IS integration decision support model	394
9.1.2.1 Decision relevance per stage of the decision-making process	398
9.1.2.2 Description of the decision relevance per (main) decision aspect	400
9.1.2.3 Analysis of industry-related differences regarding the decision relevance	403
9.1.3 Results regarding IS-related possibilities to support selected M&A success factors and the integration of employees	405
9.2 Discussion	414
9.2.1 Discussion of results in regard to general M&A & post-merger IS integration issues	414
9.2.1.1 Discussion of the degree of IS involvement	414
9.2.1.2 Discussion of considered IS aspects within the due diligence	422
9.2.1.3 Discussion of the prioritization aspects of the IS integration measures	427
9.2.1.4 Discussion of the technical and IS integration challenges	430
9.2.1.5 Discussion of the successful IS integration measures / aspects and their contribution to a successful accomplishment of the post-merger IS integration	433
9.2.2 Discussion of the findings in regard to the validation & enhancement of the IS integration decision support model of Wijnhoven et al. (2006)	435
9.2.2.1 Discussion of the case study characteristics to validate the relationships between M&A type, M&A integration strategy and IS integration strategy	435
9.2.2.2 Discussion of the results of the stage-specific, weighted relevance of the decision aspects of the enhanced IS integration decision support model	442
9.2.3 Discussion of the results regarding IS-related possibilities (incl. SOA) to support selected M&A success factors and the integration of employees	449
9.2.4 Summary of the findings in regard to the to-be analyzed theses	457

10. Conclusions	461
Appendix	481
Appendix 1: Explanation of data quality attributes	481
Appendix 2: Example of how a commercial integration platform addresses the various IS-related integration levels	482
Appendix 3: Basic characteristics of a service and technical elements of Web Services	486
Appendix 4: Detailed overview of M&A success factors & failure sources	489
Appendix 5: How to evaluate and rate “soft aspects” as well as the degree of requirements coverage	499
Appendix 6: Detailed description of the evaluation matrix for support of process requirements	503
Appendix 7: Detailed description of the M&A case studies	506
Appendix 8: Interview questionnaire	532
References	546