

**UNIVERSITY OF TECHNOLOGY, SYDNEY**  
**FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY**

**THE CRITICAL SUCCESS FACTORS OF  
ENTERPRISE ARCHITECTURE**

By Thomas Hope

A thesis submitted in fulfilment of the requirements for the degree of  
Doctor of Philosophy in Information Technology

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## DEDICATION

For my Anna-Lisa who put up with so much for so long and for the two other Tom Hopes I know. My father whose life's circumstances conspired against his education and my son, in the hope that one day it might inspire him.

## CERTIFICATE OF AUTHORSHIP / ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged in the text.

I also certify that I am the author of this the thesis and that any help that I have received in my research and preparation of this thesis has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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## OVERVIEW CONTENTS

<b>ABBREVIATIONS and TERMS .....</b>	<b>xv</b>
<b>ABSTRACT.....</b>	<b>xvi</b>
<b>1 INTRODUCTION .....</b>	<b>- 1 -</b>
<b>2 RESEARCH DESIGN AND DATA COLLECTION .....</b>	<b>- 21 -</b>
<b>3 LITERATURE REVIEW AND ANALYSIS.....</b>	<b>- 39 -</b>
<b>4 SURVEY ANALYSIS.....</b>	<b>- 101 -</b>
<b>5 THE INTERVIEWS.....</b>	<b>- 112 -</b>
<b>6 FINDINGS.....</b>	<b>- 131 -</b>
<b>7 CONCLUSIONS .....</b>	<b>- 186 -</b>
<b>8 DISCUSSION.....</b>	<b>- 195 -</b>
<b>9 BIBLIOGRAPHY.....</b>	<b>- 199 -</b>
<b>10 APPENDIX A - CLASSIFICATION TOOL .....</b>	<b>- 213 -</b>
<b>11 APPENDIX B – REFERENCED OBSERVATION SOURCES.....</b>	<b>- 224 -</b>
<b>12 APPENDIX C - SURVEY DATA.....</b>	<b>- 227 -</b>
<b>13 APPENDIX D – INTERVIEW METHOD .....</b>	<b>- 293 -</b>
<b>14 APPENDIX E – TRANSCRIPTS AND INTERVIEW NOTES.....</b>	<b>- 294 -</b>
<b>15 APPENDIX F – INTERVIEW ANALYSIS.....</b>	<b>- 418 -</b>

## TABLE OF CONTENTS

<b>LIST OF FIGURES.....</b>	<b>xiii</b>
<b>LIST OF TABLES .....</b>	<b>xiv</b>
<b>ABBREVIATIONS and TERMS .....</b>	<b>xv</b>
<b>ABSTRACT.....</b>	<b>xvi</b>
<b>1 INTRODUCTION .....</b>	<b>- 1 -</b>
1.1 Motivation .....	- 1 -
1.2 Developing the Question.....	- 2 -
1.3 Definitions .....	- 5 -
1.3.1 Architecture .....	- 5 -
1.3.2 Methodology.....	- 7 -
1.3.3 Programme .....	- 7 -
1.3.4 Agreed Programme Strategy.....	- 7 -
1.3.5 Alignment.....	- 7 -
1.3.6 Structuration Theory .....	- 7 -
1.3.7 Organizational Capability.....	- 9 -
1.3.8 Organizational Routines, Practice and Mastery.....	- 10 -
1.3.9 Architecture as Practice.....	- 12 -
1.3.10 Communities of Practice.....	- 13 -
1.3.11 Situational Learning.....	- 14 -
1.3.12 Knowledge Brokers.....	- 14 -
1.3.13 Boundary Objects .....	- 14 -
1.3.14 Structure, Routines and Capability.....	- 15 -
1.3.15 Critical Success Factors .....	- 16 -

1.4	Contribution of this Thesis .....	- 17 -
1.5	Benefits.....	- 18 -
1.6	Outcomes .....	- 19 -
1.7	Thesis Organization.....	- 19 -
<b>2</b>	<b>RESEARCH DESIGN AND DATA COLLECTION .....</b>	<b>- 21 -</b>
2.1	Overview.....	- 21 -
2.2	Paradigms .....	- 23 -
2.3	Design.....	- 24 -
2.4	Process .....	- 25 -
2.5	Methods .....	- 28 -
2.5.1	Literature Review .....	- 28 -
2.5.2	Use of Secondary Sources.....	- 28 -
2.5.3	Data Classification Tool.....	- 28 -
2.5.4	Data Classification .....	- 32 -
2.5.5	Survey .....	- 33 -
2.5.6	Interviews .....	- 34 -
2.6	Axiom .....	- 35 -
2.7	Design Decisions .....	- 36 -
2.8	Data Collection.....	- 37 -
2.8.1	Literary Sources.....	- 37 -
2.8.2	Literature .....	- 37 -
2.8.3	Survey .....	- 38 -
2.8.4	Interviews .....	- 38 -
<b>3</b>	<b>LITERATURE REVIEW AND ANALYSIS.....</b>	<b>- 39 -</b>
3.1	Historical Context.....	- 39 -
3.2	Literary Structure .....	- 48 -

3.3	Literary Themes .....	- 52 -
3.3.1	Definition .....	- 53 -
3.3.2	Scope .....	- 55 -
3.3.3	Fragmentation.....	- 57 -
3.3.4	Case Studies .....	- 57 -
3.3.5	Competing Epistemologies .....	- 57 -
3.3.6	Evolution .....	- 58 -
3.4	Quantitative Literature Analysis .....	- 61 -
3.5	The Critical Success Factors .....	- 64 -
3.5.1	Strategy for Development .....	- 64 -
3.5.2	Formal Methodology.....	- 64 -
3.5.3	Architecture Tools .....	- 64 -
3.5.4	Monitoring and Compliance .....	- 64 -
3.5.5	Commitment and Motivation .....	- 65 -
3.5.6	Consultation and Communication.....	- 65 -
3.5.7	Empirical Summary.....	- 65 -
3.6	An Alternative View .....	- 66 -
3.7	Interpreting the CSFs.....	- 67 -
3.8	The Structure of Architecture Practice.....	- 71 -
3.8.1	Architectonic Activity.....	- 73 -
3.8.2	Architectonic Dynamics .....	- 80 -
3.8.3	Architectonic Activities and Organizational Routines .....	- 81 -
3.8.4	Architectonic Activities and Structuration.....	- 82 -
3.8.5	Corroborating the Architectonic Activities .....	- 83 -
3.8.6	Architectonic Activities and Organizational Capability.....	- 83 -
3.8.7	Routines, Methodology and Activities.....	- 85 -



3.8.8	The Root of Certain Failure .....	- 88 -
3.9	An Organizational View .....	- 88 -
3.9.1	Interpreting the Model .....	- 93 -
3.10	The Data .....	- 94 -
3.10.1	Realization Activity .....	- 94 -
3.10.2	Cultivation Activity .....	- 96 -
3.10.3	Assimilation Activity .....	- 97 -
3.11	Summary .....	- 98 -
<b>4</b>	<b>SURVEY ANALYSIS .....</b>	<b>- 101 -</b>
4.1	Survey .....	- 101 -
4.2	Survey Organization .....	- 101 -
4.3	Demographics .....	- 101 -
4.3.1	Work History .....	- 101 -
4.3.2	Background .....	- 101 -
4.3.3	Education .....	- 102 -
4.3.4	Titles and Roles .....	- 102 -
4.3.5	Vocational Training .....	- 102 -
4.3.6	Vocational Training Summarized .....	- 104 -
4.3.7	Bodies of Knowledge .....	- 104 -
4.3.8	Certification .....	- 104 -
4.4	Critical Success Factors .....	- 105 -
4.4.1	Alignment with the Business .....	- 107 -
4.4.2	Coordination with Developers .....	- 107 -
4.4.3	Purpose of Architecture .....	- 107 -
4.4.4	Commitment to the Use of Architecture .....	- 108 -
4.4.5	Consultation and Communication .....	- 108 -

4.4.6	Executing on CSFs.....	- 108 -
4.4.7	AS-IS State.....	- 109 -
4.5	Summary .....	- 109 -
<b>5</b>	<b>THE INTERVIEWS.....</b>	<b>- 112 -</b>
5.1	The Participants .....	- 113 -
5.2	Interview Overviews and Analysis .....	- 114 -
5.3	The Losing Interviews.....	- 115 -
5.3.1	IAN – A Federal Government Department .....	- 115 -
5.3.2	DAVE – A Large Insurance Company .....	- 117 -
5.4	The Isolated Interview.....	- 119 -
5.4.1	PHIL – An Insurance Company .....	- 119 -
5.5	The Barrier Interview .....	- 120 -
5.5.1	JIM – A Global Insurance Company.....	- 120 -
5.6	The Enablers Interviews .....	- 122 -
5.6.1	ALAN – A State Government Department .....	- 122 -
5.6.2	DEAN – A Financial Services Company .....	- 122 -
5.6.3	PETE – A Senior Architect at a Big Bank.....	- 125 -
5.6.4	FRED – Another Big Bank.....	- 126 -
5.7	Consultant Interview.....	- 127 -
5.7.1	BILL – A Respected Consultant.....	- 127 -
5.8	Themes.....	- 128 -
5.9	Interviews Insights .....	- 130 -
<b>6</b>	<b>FINDINGS.....</b>	<b>- 131 -</b>
6.1	Epistemology of Findings.....	- 131 -
6.2	Key Findings.....	- 132 -
6.3	Paradigms .....	- 132 -

6.4	Attributes and Dialect .....	- 133 -
6.4.1	Origin and Attributes .....	- 133 -
6.4.2	Nature and Dialects .....	- 134 -
6.4.3	Dialect and CSFs .....	- 135 -
6.4.4	Evolution of Architecture.....	- 136 -
6.5	Environment and Context .....	- 137 -
6.5.1	Structure, Alignment and Authority .....	- 138 -
6.5.2	Power and Dialogue .....	- 146 -
6.5.3	Organizational Culture and Monitoring.....	- 147 -
6.5.4	Contractors and Consultants .....	- 151 -
6.6	Architecture Programme.....	- 152 -
6.6.1	Literature and Reality .....	- 152 -
6.6.2	Organizational Capability.....	- 153 -
6.6.3	Strategy and Legitimacy.....	- 155 -
6.6.4	Leadership and the Development of Architecture.....	- 159 -
6.6.5	Roles and Responsibilities.....	- 162 -
6.6.6	Methodology.....	- 164 -
6.6.7	An Appropriate Methodology is Communication .....	- 164 -
6.6.8	Metric Relevance, Influence and Legitimacy .....	- 171 -
6.6.9	Critical Success Factors .....	- 173 -
6.7	Practice.....	- 175 -
6.7.1	Architects' Reality.....	- 175 -
6.7.2	Architect Demographics .....	- 176 -
6.7.3	Durée and Dialogue, Methodology and Routine .....	- 177 -
6.7.4	Architects in the Durée.....	- 179 -
6.7.5	Enablers and Losers.....	- 182 -

6.7.6	Power, Trust and Commitment.....	- 183 -
<b>7</b>	<b>CONCLUSIONS .....</b>	<b>- 186 -</b>
7.1	Purpose Driven Architecture .....	- 186 -
7.1.1	Cultivating.....	- 186 -
7.1.2	Realizing.....	- 186 -
7.1.3	Assimilating.....	- 186 -
7.2	Design and Action .....	- 187 -
7.2.1	Sociological Schematic.....	- 188 -
7.2.2	Architecture Practice Framework .....	- 189 -
7.3	A PDAP Approach.....	- 191 -
<b>8</b>	<b>DISCUSSION.....</b>	<b>- 195 -</b>
8.1	Overview.....	- 195 -
8.2	Discussion .....	- 196 -
8.3	Limitations of Research .....	- 197 -
8.4	Research Opportunities.....	- 197 -
<b>9</b>	<b>BIBLIOGRAPHY.....</b>	<b>- 199 -</b>
<b>10</b>	<b>APPENDIX A - CLASSIFICATION TOOL .....</b>	<b>- 213 -</b>
<b>11</b>	<b>APPENDIX B – REFERENCED OBSERVATION SOURCES.....</b>	<b>- 224 -</b>
<b>12</b>	<b>APPENDIX C - SURVEY DATA.....</b>	<b>- 227 -</b>
<b>13</b>	<b>APPENDIX D – INTERVIEW METHOD .....</b>	<b>- 293 -</b>
<b>14</b>	<b>APPENDIX E – TRANSCRIPTS AND INTERVIEW NOTES.....</b>	<b>- 294 -</b>
14.1	Participant: IAN - Recording: VN860005 .....	- 295 -
14.2	Participant: DAVE - Recording: VN860006 .....	- 313 -
14.3	Participant: DAVE - Recording: VN860007 .....	- 316 -
14.4	Participant: DEAN – Recording: VN860013 .....	- 322 -
14.5	Participant: DEAN - Recording: VN860014.....	- 330 -

14.6	Participant: DEAN - Recording: VN860015 .....	- 336 -
14.7	Participant: JIM - Recording: VN860016 .....	- 340 -
14.8	Participant: PETE - Recording: VN860017 .....	- 352 -
14.9	Participant: ALAN - Recording: VN860020 .....	- 362 -
14.10	Participant: ALAN - Recording: VN860021 .....	- 379 -
14.11	Participant: FRED - Recording: VN860022 .....	- 383 -
14.12	Participant: BILL - Recording: VN860041 .....	- 397 -
14.13	Participant: PHIL -Notes from a single interview .....	- 415 -
14.14	Participant: DAVE - Notes from passing encounters .....	- 417 -
<b>15</b>	<b>APPENDIX F – INTERVIEW ANALYSIS .....</b>	<b>- 418 -</b>

## LIST OF FIGURES

Figure 1: A Socio-technological Map of Architecture.....	- 15 -
Figure 2: Enterprise Architecture in Context .....	- 21 -
Figure 3: Information Systems Research Framework .....	- 25 -
Figure 4: Research Process .....	- 25 -
Figure 5: Research Map .....	- 27 -
Figure 6: Zachman Framework as Enterprise Ontology .....	- 40 -
Figure 7: Framework with Functioning System Perspective.....	- 41 -
Figure 8: Zachman Framework2 .....	- 42 -
Figure 9: Evolution of Architecture Model .....	- 60 -
Figure 10: Tally of Sources Reporting Key Areas.....	- 62 -
Figure 11: Intersection of Literary CSFs.....	- 66 -
Figure 12: Business-IT Dialogue Model of CSFs .....	- 69 -
Figure 13: Practice Focus .....	- 72 -
Figure 14: Ontology of EA Practice.....	- 78 -
Figure 15: Mutual Constitution of Architectonic Activities .....	- 80 -
Figure 16: Architecture Practice and the Duality of Structure.....	- 82 -
Figure 17: Quadrant Model .....	- 83 -
Figure 18: Repositioning by Cultivation.....	- 87 -
Figure 19: Architecture Topography Model.....	- 90 -
Figure 20: CSFs Distribution across the Architecture Topography.....	- 91 -
Figure 21: CSFs Identified in the Literature as Percentage of Sources.....	- 105 -
Figure 22: Percentage of Surveyed that Rate Factors Important to Critical.....	- 105 -
Figure 23: Percentage of Surveyed that Rate Factors Important to Critical with Bogus Factors .....	- 106 -
Figure 24: CSFs Identified in the Survey .....	- 106 -
Figure 25: CSFs Execution .....	- 109 -
Figure 26: CSFs Executed Very Well or Excellently.....	- 109 -
Figure 27: Transcript Analysis .....	- 113 -
Figure 28: Architectural Communication Model.....	- 169 -
Figure 29: Methodology, Routines, Activities, Dialogue and Durée .....	- 178 -
Figure 30: Sociological Schematic .....	- 188 -
Figure 31: Architecture Practice Framework .....	- 190 -

Figure 32: PDAP Schematic..... - 192 -

## LIST OF TABLES

Table 1: Perspective-Based Definitions of Architecture..... - 5 -

Table 2: Gregor’s Taxonomy of IS Theories ..... - 22 -

Table 3: Examples of Observation Classifications ..... - 31 -

Table 4: Promoting the Builders’ Paradigm ..... - 43 -

Table 5: Structure of the Literature..... - 48 -

Table 6: Critical Success Factors..... - 49 -

Table 7: Examples of Different Scopes Found in Commercial Methodology Publications..... - 51 -

Table 8: Publications Demonstrating the Emergent Nature of EA..... - 52 -

Table 9: Examples of Case Studies from Commercial Methodology Literature ..... - 57 -

Table 10: Literary Derived CSFs..... - 62 -

Table 11: Activity Definitions ..... - 75 -

Table 12: Unified Architectonic Sources..... - 76 -

Table 13: CSFs Mapped to Architectonic Activity ..... - 79 -

Table 14: Wognum and Ip-Shing’s Aspect Definitions ..... - 89 -

Table 15: Realization Observations ..... - 94 -

Table 16: Cultivation Observations ..... - 96 -

Table 17: Assimilation Observations ..... - 97 -

Table 18: Survey Derived CSFs ..... - 107 -

Table 19 Principal Survey Points ..... - 111 -

Table 20: Interview Themes..... - 129 -

## ABBREVIATIONS and TERMS

AoEA	Association of Enterprise Architects
BA	Business Analyst
BPM	Business Process Model
COP	Community of Practice
CSF	Critical Success Factor
EA	Enterprise Architecture
GERA	Generic Enterprise Reference Architecture
IEEE	Institute of Electrical and Electronic Engineers
IASA	International Association of Software Architects
IS	Information Systems
IT	Information Technology
PDAP	Purpose Driven Architecture Practice
PM	Project Manager
PMO	Project Management Office
SME	Subject Matter Expert
TOGAF	The Open Group Architecture Framework
UML	Unified Modelling Language



## ABSTRACT

After more than twenty five years of development many organizations still struggle to harness Enterprise Architecture's potential with, according to the literature, perhaps only five per cent of them succeeding.

Seeking the critical success factors (CSFs) of Enterprise Architecture, the research begins with a systematic analysis, to minimize subjectivity, of an eclectic but extensive collection of literature. With few extant sources directly addressing the question much of the data is discursive. Overall, this methodology-centric literature offers, as a result of an ascendant "Builders' paradigm", a plethora of advice on WHAT artefacts to create and HOW to create them, but little on the socially constructed realities of architecture.

While an initial list of CSFs is derived from the literature, tainted by the methodological discourse, they are individually inadequate and collectively less than a compelling explanation of this complex socio-technical phenomenon. So, concluding that EA's historical development has resulted in a deficient body of knowledge, and influenced by Hevner, March, Park and Ram's (2004) call for alignment with real world experience, the research embarks on the transdisciplinary engagement of primary sources, architects. Over 200 architects from 20 countries and 16 industries were surveyed while architects from both successful and failed programmes were interviewed.

The subsequent analytical integration and interpretation of literary, survey and interview data creates a new rich empirically-founded resource for researchers to exploit and extend that suggests the origins of many of the salient features of architecture. From this integrated analysis an insightful understanding of EA "practice" emerges – in the sense of a "tacit mastery" of the architects. The analysis concludes that the cultivation of a legitimized, purposeful, and socially reproduced *practice*, by the actions of the architects, *is* the foundation of success.

The core contribution of the research is a new sociologically-centric body of knowledge called Purpose Driven Architecture Practice (PDAP). This is a significant alternative 'paradigm' to the prevailing artefact centrality that dominates architecture. PDAP employs empirically substantiated success factors to provide a socio-centric practice framework that management and architects can use to develop an "enabling" enterprise architecture programme.

The thesis closes with a call for further research into the sociological aspects of architecture.