

BUSINESS ANALYSIS TECHNIQUES

72 Essential Tools
for Success

James Cadle,
Debra Paul and
Paul Turner



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CONTENTS

	List of figures and tables	vii
	Authors	xi
	List of abbreviations	xii
	Alphabetical list of techniques	xiv
	Preface	xix
1	BUSINESS STRATEGY AND OBJECTIVES	1
	Introduction	1
	Strategy analysis – external business environment	3
	Strategy analysis – internal capability	9
	Strategy definition	14
	Strategy implementation	17
	Performance measurement	21
	References	24
	Further reading	24
2	INVESTIGATE SITUATION	25
	Introduction	25
	Qualitative investigation	26
	Quantitative investigation	42
	Documenting the results	53
	References	59
	Further reading	60
3	CONSIDER PERSPECTIVES	61
	Introduction	61
	Stakeholder identification	63
	Stakeholder analysis	66
	Stakeholder management	81
	References	90
	Further reading	90
4	ANALYSE NEEDS	91
	Introduction	91
	Organisation modelling	92
	Business process analysis	101
	Business change identification	118
	References	121
	Further reading	122

5	EVALUATE OPTIONS	123
	Introduction	123
	Identify options	124
	Shortlist options	125
	Prepare business case	133
	Present business case	151
	References	155
	Further reading	155
6	DEFINE REQUIREMENTS	157
	Introduction	157
	Requirements elicitation	160
	Requirements analysis	173
	Requirements development	184
	Requirements modelling	205
	References	227
	Further reading	227
7	MANAGE CHANGE	229
	Introduction	229
	Organisational change	230
	People change	237
	Benefits management and realisation	244
	References	250
	Further reading	251
	Postscript – which techniques do I <i>really</i> need?	253
	Index	257

LIST OF FIGURES AND TABLES

Figure 1.1	Porter's Five Forces framework	6
Figure 1.2	Resource Audit	11
Figure 1.3	The Boston Box	13
Figure 1.4	SWOT analysis	14
Figure 1.5	Ansoff's matrix	16
Figure 1.6	The McKinsey 7-S model	18
Figure 1.7	The four-view model	20
Figure 1.8	Balanced Business Scorecard	23
Figure 2.1	The main stages of interviewing	26
Figure 2.2	The structure of an interview	27
Figure 2.3	Workshop process	30
Figure 2.4	The elements of a questionnaire	43
Figure 2.5	Activity sampling sheet (completed)	47
Figure 2.6	Sampling analysis summary sheet	48
Figure 2.7	Special-purpose record for complaints handling	50
Figure 2.8	Detailed weekly timesheet	51
Figure 2.9	Example of a document specification form	52
Figure 2.10	Example rich picture (of a sales organisation)	54
Figure 2.11	Example of a mind map	56
Figure 2.12	Context diagram	58
Figure 3.1	The stakeholder wheel	65
Figure 3.2	Power/interest grid	67
Figure 3.3	Extended power/interest grid	68
Figure 3.4	Business Activity Model for a high-street clothing retailer	78
Figure 3.5	RASCI chart	79
Figure 3.6	Thomas-Kilmann conflict mode instrument	85
Figure 4.1	Systemic analysis approach	91
Figure 4.2	Types of value proposition	94
Figure 4.3	Porter's value chain	95
Figure 4.4	Partial value chain of primary activities – example	97
Figure 4.5	Value chain for an examination body	98
Figure 4.6	Organisation Diagram showing external environment	99
Figure 4.7	Completed Organisation Diagram	100
Figure 4.8	Context diagram supporting event identification	103
Figure 4.9	Business process notation set	106
Figure 4.10	Business process model with detailed steps	109
Figure 4.11	Business process model showing rationalised steps	109
Figure 4.12	Decision table structure	113
Figure 4.13	Example decision tree	117

Figure 5.1	The process for evaluating options	123
Figure 5.2	Options identification	125
Figure 5.3	Shortlisting options	126
Figure 5.4	Incremental options	127
Figure 5.5	Elements of feasibility	128
Figure 5.6	Force-field analysis	132
Figure 5.7	Types of cost and benefit	134
Figure 6.1	Storyboard for a travel agent	166
Figure 6.2	Hothousing process	173
Figure 6.3	Outer and inner timeboxes	174
Figure 6.4	Example of the structure of a typical timebox	177
Figure 6.5	Example requirements catalogue entry	189
Figure 6.6	Links between requirements and other development elements	204
Figure 6.7	Basic elements of a use case diagram	206
Figure 6.8	Additional use case notation	207
Figure 6.9	Use case description for 'Assign resources'	210
Figure 6.10	Examples of entities	212
Figure 6.11	One-to-many relationship between entities	212
Figure 6.12	Optional relationship	213
Figure 6.13	Many-to-many relationship	213
Figure 6.14	Resolved many-to-many relationship	213
Figure 6.15	Extended data model	214
Figure 6.16	Recursive relationship	214
Figure 6.17	Many-to-many recursive relationship	215
Figure 6.18	Exclusive relationship	215
Figure 6.19	Separated exclusive relationship	216
Figure 6.20	Named relationships	216
Figure 6.21	Subtypes and super-types	217
Figure 6.22	Example entity relationship model	218
Figure 6.23	Partial library model	218
Figure 6.24	An object class	220
Figure 6.25	Association between classes	221
Figure 6.26	Association class	222
Figure 6.27	Additional linked classes	223
Figure 6.28	Reflexive relationship	223
Figure 6.29	Generalisation	224
Figure 6.30	Example class model	225
Figure 7.1	Johnson and Scholes's cultural web	233
Figure 7.2	Kurt Lewin's model of organisational change	236
Figure 7.3	The SARAH model of change	238
Figure 7.4	Kolb's learning cycle	240
Figure 7.5	Honey and Mumford's learning styles	241
Figure 7.6	Conscious competence model	243
Figure 7.7	Benefits map	245
Figure 7.8	Bar chart showing changes and benefits against timeline	246
Figure 7.9	Benefits realisation approach	249

Table 3.1	Example of a stakeholder management plan	84
Table 4.1	Examples of business events	104
Table 4.2	Example hierarchical numbering system	108
Table 4.3	Condition stub in a decision table	113
Table 4.4	Decision table condition entries – one condition	114
Table 4.5	Decision table condition entries – two conditions	114
Table 4.6	Decision table condition entries – three conditions	114
Table 4.7	Action stub in a decision table	115
Table 4.8	Decision table with two conditions	115
Table 4.9	Decision table with three conditions	115
Table 4.10	Decision table with rationalised conditions	116
Table 4.11	Decision table with exclusive conditions	117
Table 4.12	Extended-entry decision table	117
Table 5.1	Payback or breakeven analysis	148
Table 5.2	Discounted cash flow / net present value calculation	149
Table 6.1	Scenario analysis by user population	163
Table 6.2	Scenario analysis by environment	163
Table 6.3	Scenario analysis by frequency of use	163
Table 6.4	Content of a typical requirements specification	185
Table 6.5	Considerations for verification and validation	193
Table 6.6	Example of a CRUD matrix (partial)	226

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LIST OF ABBREVIATIONS

BA	business analyst
BAM	Business Activity Model
BATNA	Best Alternative to a Negotiated Agreement
BBS	Balanced Business Scorecard
CASE	computer-aided software engineering
CATWOE	customer, actor, transformation, <i>Weltanschauung</i> or world view, owner and environment (analysis)
CBA	cost–benefit analysis
CRUD (matrix)	create, read, update and delete (matrix)
CSF	critical success factor
DCF	discounted cash flow
ERM	entity relationship model
HR	human resources
IRR	internal rate of return
IT	information technology
JAD	Joint Application Development (workshop – IBM)
KPI	key performance indicator
MoSCoW	must have, should have, could have, want to have but won't have this time
MOST (analysis)	mission, objectives, strategy and tactics (analysis)
NPV	net present value
PESTLE (analysis)	political, economic, socio-cultural, technological, legal and environmental (or ecological) (analysis)
PIR	post-implementation review

RASCI	responsible, accountable, supportive, consulted and informed (charts)
ROI	return on investment
SARAH (model)	shock, anger, rejection, acceptance and hope (model)
SSADM	Structured Systems Analysis and Design Method
STROBE	STRuctured Observation of the Business Environment
SWOT (analysis)	strengths, weaknesses, opportunities and threats
UML	Unified Modeling Language

ALPHABETICAL LIST OF TECHNIQUES

Names and numbers of techniques in standard type indicate the main name that has been used in the book. Techniques shown in italics and with suffixes on the numbers (for example, *17c*) indicate an alias or variant on the main name.

Number	Chapter	Page	Name
58	6	188	Acceptance criteria definition
<i>17a</i>	2	46	<i>Activity sampling</i>
<i>7a</i>	1	16	<i>Ansoff's Box</i>
7	1	16	Ansoff's matrix
<i>29b</i>	3	78	<i>ARCI charts</i>
<i>24b</i>	3	63	<i>Background reading</i>
24	3	63	Background research
12	1	22	Balanced Business Scorecard
<i>28a</i>	3	75	<i>Business Activity Model (BAM)</i>
<i>44a</i>	5	133	<i>Benefit-cost analysis (BCA)</i>
71	7	244	Benefits management
72	7	248	Benefits realisation
5	1	12	Boston Box
<i>5a</i>	1	12	<i>Boston Consulting Group matrix</i>
<i>5b</i>	1	12	<i>BCG matrix</i>
28	3	75	Business activity modelling
49	5	154	Business case presentation
48	5	151	Business case report creation
36	4	101	Business event analysis
37	4	105	Business process modelling
<i>36b</i>	4	101	<i>Business process triggers</i>

Number	Chapter	Page	Name
38	4	110	Business rules analysis
27	3	71	CATWOE
64	6	219	Class modelling
21c	2	55	<i>Concept maps</i>
28b	3	75	<i>Conceptual model</i>
70	7	242	Conscious competence model
38a	4	110	<i>Constraints analysis</i>
22	2	57	Context diagram
44	5	133	Cost-benefit analysis (CBA)
10	1	21	Critical success factors
65	6	225	CRUD matrix
66	7	230	Cultural analysis
39	4	112	Decision tables and decision trees
19	2	51	Document analysis
63a	6	211	<i>Entity relationship diagrams (ERDs)</i>
63	6	211	Entity relationship modelling
15e	2	39	<i>Ethnographic study</i>
14a	2	30	<i>Facilitated workshops</i>
42	5	128	Feasibility analysis
43	5	132	Force-field analysis
9	1	20	Four-view model
40	4	118	Gap analysis
53	6	171	Hothousing
45	5	141	Impact analysis
26a	3	66	<i>Influence/interest grid</i>
13	2	26	Interviewing
47	5	146	Investment appraisal
14c	2	30	<i>Joint Application Development Workshops (IBM)</i>
14b	2	30	<i>Joint requirements planning workshops</i>
11	1	21	Key performance indicators
69a	7	239	<i>Kolb cycle</i>

ALPHABETICAL LIST OF TECHNIQUES

Number	Chapter	Page	Name
67	7	235	Kurt Lewin's model of organisational change
69	7	239	Learning cycle
69b	7	239	<i>Learning styles</i>
28c	3	75	<i>Logical activity model</i>
63b	6	211	<i>Logical data modelling/models (LDM)</i>
8	1	17	McKinsey's 7-S
21	2	55	Mind maps
55	6	176	MoSCoW prioritisation
3	1	9	MOST analysis
64a	6	219	<i>Object class modelling</i>
15	2	39	Observation
41	5	124	Options identification
35	4	98	Organisation Diagram
35a	4	98	<i>Organisation model</i>
1a	1	3	<i>PEST analysis</i>
1b	1	3	<i>PESTEL analysis</i>
1	1	3	PESTLE analysis
1c	1	3	<i>PESTLIED analysis</i>
26b	3	66	<i>P/I grid</i>
26c	3	66	<i>Power/impact grid</i>
26	3	66	Power/interest grid
16	2	42	Questionnaires
27b	3	71	<i>PARADE</i>
2	1	6	Porter's Five Forces framework
32	3	87	Principled negotiation
37b	4	105	<i>Process maps</i>
15d	2	39	<i>Protocol analysis</i>
52	6	167	Prototyping
29a	3	78	<i>RACI charts</i>
29	3	78	RASCI charts
17c	2	46	<i>Record sampling</i>

Number	Chapter	Page	Name
24a	3	63	<i>Report analysis</i>
57	6	184	Requirements documentation
60	6	198	Requirements management
56	6	180	Requirements organisation
61	6	203	Requirements traceability matrix
59	6	192	Requirements validation
4a	1	10	<i>Resource analysis</i>
4	1	10	Resource Audit
20	2	53	Rich pictures
46	5	143	Risk analysis
46b	5	143	<i>Risk identification</i>
46a	5	143	<i>Risk management</i>
27c	3	71	<i>Root definition</i>
17	2	46	Sampling
68	7	237	SARAH model
50	6	160	Scenarios
21a	2	55	<i>Semantic networks</i>
15c	2	39	<i>Shadowing</i>
18	2	49	Special-purpose records
30	3	81	Stakeholder management planning
30a	3	81	<i>Stakeholder map</i>
23	3	63	Stakeholder nomination
25	3	64	Stakeholder wheel
1d	1	3	<i>STEEPLE analysis</i>
51	6	165	Storyboarding
15b	2	39	<i>STROBE</i>
15a	2	39	<i>Structured observation</i>
16a	2	42	<i>Surveys</i>
37a	4	105	<i>Swimlane diagrams</i>
6	1	14	SWOT analysis
36a	4	101	<i>System event analysis</i>

ALPHABETICAL LIST OF TECHNIQUES

Number	Chapter	Page	Name
31	3	84	Thomas–Kilman conflict mode instrument
31b	3	84	<i>Thomas–Kilman conflict model</i>
31a	3	84	<i>Thomas–Kilman instrument (TKI)</i>
9a	1	20	<i>Three-view model</i>
54	6	173	Timeboxing
18a	2	49	<i>Timesheets</i>
6a	1	14	<i>TOWS analysis</i>
62	6	205	Use case diagrams and use case descriptions
34	4	95	Value chain analysis
33	4	92	Value proposition analysis
3a	1	9	<i>VMOST analysis</i>
27a	3	71	<i>VOCATE</i>
21b	2	55	<i>Webs</i>
17b	2	46	<i>Work measurement</i>
14	2	30	Workshops

PREFACE

The idea for this book came from a talk given to the UK Chapter of the International Institute of Business Analysts in July 2007. The subject was 'Business Analysis Techniques', and, rather than just concentrating on one or two techniques, we decided to survey the whole field of them and suggest where each could be used. Between us we brainstormed some 80-odd techniques and then grouped them according to different aspects of the business analyst's role. The talk was well received, and various people said afterwards how useful they'd found it. So we wondered whether there might not be a niche for a book that surveyed the wide range of techniques that can be used in business analysis work and gave advice on where and how each might be employed.

In many ways we believe that a business analyst (BA) is in a similar position to that of other skilled professionals. Take a surgeon, for example, who will have available a wide array of instruments during a procedure. Some of these (a scalpel, for instance) are used all the time; others have very specific uses. Skilled surgeons (i) have all of the instruments at their disposal, (ii) know how to use each, and (iii) know which one to select at each point in the procedure. Also, since each procedure is different, each will require its own specific combination of instruments to be used in a particular order. The business analyst, similarly, needs a full kit of tools and the skills and knowledge to be able to use each when and where it is needed.

This book is designed to complement *Business Analysis*, edited by Debra Paul and Donald Yeates and first published by BCS in 2006. *Business Analysis* is the first book specifically on this field, and provides an overall treatment of its subject, presenting the lifecycle of an assignment and reviewing the methods that can be used to carry it out. The book covers many techniques, but the limited space available did not permit the authors to go into a lot of detail. The present book therefore starts where *Business Analysis* leaves off, and 'drills down' into more detail on the various techniques that BAs may apply in their work. We have decided to adopt the process model presented in Chapter 4 of *Business Analysis* to provide a framework for this book, and we hope this will make it easier for readers to see how the two publications complement and support each other. So our first six chapters are called 'Business strategy and objectives', 'Investigate situation', 'Consider perspectives', 'Analyse needs', 'Evaluate options' and 'Define requirements'. But we've also added a seventh chapter called 'Manage change', so that we can cover techniques such as benefits management and realisation, and some of the organisational and human issues associated with change management, more fully.

Each chapter of the book therefore represents a stage in the business analysis process. We give an introduction to each stage and then divide each into logical sections. Within these sections are the techniques, and, for each technique, we give the following elements:

Name of the technique:	Here we've selected the most commonly used name, at least in the UK.
Variants/ Aliases:	One problem in business analysis (as in other fields) is that people use different names for the same thing, so we list the most common alternative names for the technique. Where there don't seem to be any common synonyms, we have omitted this.
Description of the technique:	This is a detailed, step-by-step description of the technique and the way it is used. Some techniques – that of workshops (number 14) is a good example – have sub-techniques (such as brainstorming, in the case of workshops) within them, and these are also described.
Using the technique:	This part provides practical advice based on our experience, including discussions of the pros and cons of each technique, and where it does and does not work best.

At the end of each stage we provide references and further reading. Here we list the books that we have found useful over the years in our practice of business analysis, and suggest where our readers might like to go for more information.

We have placed each technique in what we consider to be the most appropriate chapter, but we do need to make an important point here: **many techniques can be used at various stages for different purposes**. For example, we have put workshops under 'Investigate situation', but, clearly, workshops are equally useful at many other points in a project. Similarly, we have prototyping under 'Define requirements', but this can also be used within a workshop to help 'Investigate situation'.

Of course, no book of this type can ever hope to be completely comprehensive. This one includes descriptions of 72 separate techniques or, taking the variants and aliases into account, 129. We are sure individual readers will be upset that some favourite technique of theirs has been omitted, but all we can say in our defence is that we have tried to be as inclusive as possible. (If you do feel strongly that a particular technique should be included, let us know – there may be a later edition and it could be considered for inclusion there.) We have included most of the techniques that we – with our combined experience of working in this field – have found to be useful, and we hope that you will find them useful too.

We would like to thank our ‘other halves’ – Meg Brinton, Alan Paul and Annie Turner – for putting up with our seclusion while we wrote the book; and also Matthew Flynn, of the BCS, for keeping our noses to the grindstone in the nicest way!

James Cadle
Debra Paul
Paul Turner
February 2010

1 BUSINESS STRATEGY AND OBJECTIVES

INTRODUCTION

The development of business analysis as a professional discipline has extended the role and responsibilities of the business analyst (BA). Increasingly, BAs are engaged at an early point. They investigate ideas and problems, formulate options for a way forward and produce business cases setting out their conclusions and recommendations. As a result, the responsibility for advising organisations on effective courses of action lies with BAs, and their work precedes that of the project manager.

The early engagement of BAs also places a critical responsibility upon them – the need to ensure that all business changes are in line with the mission, objectives and strategy of the organisation. This business context is the key foundation for understanding and evaluating all ideas, proposals, issues and problems put forward by managers. While few BAs are involved in analysing and developing strategy, it is vital that they know about the strategy of their organisation so that they can conduct their work with a view to supporting the implementation of the strategy and the achievement of the business objectives. Therefore, it could be argued that BAs have responsibility for the following areas:

- identifying the tactical options that will address a given situation and will support the delivery of the business strategy;
- defining the tactics that will enable the organisation to achieve its strategy;
- supporting the implementation and operation of those tactics;
- redefining the tactics after implementation to take account of business changes and to ensure continuing alignment with business objectives.

Project managers are responsible for delivering the content of the selected options, such as new or enhanced information technology (IT) systems, or improved business processes.

Given the increasing emphasis on early-engagement business analysis, and the need for this work to align with the business strategy and objectives, an understanding of strategic analysis techniques is essential for all BAs. This chapter describes a range of techniques for carrying out strategic analysis and definition, plus techniques to monitor ongoing performance.

The following four areas are covered:

- strategy analysis, including external environment and internal capability;
- strategy definition;
- strategy implementation;
- performance measurement.

Strategy analysis – external business environment (Techniques 1–2)

All organisations have to address the changes that have arisen, or can be predicted to arise, within their operating business environment. Such changes occur constantly, and any organisation that fails to identify and respond to them runs the risk of encountering business problems or even the failure of the entire enterprise. Senior management carries out regular monitoring of the business environment in order to identify any influences that may require action.

There are two techniques that are used to examine the business environment within which an organisation is operating: PESTLE analysis and Porter's Five Forces analysis.

The analysis of the external environment should be an ongoing process for senior management, since the factors identified may provide insights into problems for the future or opportunities for new successes. Using the PESTLE and five forces techniques together helps to provide a detailed picture of the situation facing an organisation. Just using one technique may leave gaps in the knowledge and understanding.

Strategy analysis – internal capability (Techniques 3–5)

Analysing the internal capability of an organisation provides insights into its areas of strength and the inherent weaknesses within it. Business commentators often recommend 'sticking to the knitting' when considering business changes. An analysis of internal capability is essential to understanding where the core skills of the organisation lie, so that relevant courses of action can be identified, and any changes be made in the knowledge that they have a good chance of success. There is little point in adopting strategies that are dependent upon areas of resource where strong capability is lacking.

There are three techniques that may be used to examine the internal capability of an organisation: MOST Analysis, Resource Audit and the Boston Box.

Strategy definition (Techniques 6–7)

During strategy definition, the results of the external and internal environmental analyses are summarised and consolidated in order to examine the situation facing the organisation and identify possible courses of action. When defining the business strategy, the factors outside the management's control are examined within the context of the organisation and its resources.

There are two techniques that may be used to define organisational strategy: SWOT analysis and Ansoff's matrix.

Strategy implementation (Techniques 8–9)

When the strategy has been defined, it is important to consider the range of issues associated with implementing it. One of the key problems here is recognising the range of areas that need to be coordinated if the business changes are to be implemented successfully.

The approaches that support the implementation of strategy are McKinsey's 7-S model and the four-view model.

Performance measurement (Techniques 10–12)

All organisations need to monitor performance. This section explains two techniques used to identify performance measures and carry out the evaluation. These are critical success factors/key performance indicators, and the Balanced Business Scorecard technique.

STRATEGY ANALYSIS – EXTERNAL BUSINESS ENVIRONMENT**Technique 1: PESTLE analysis****Variants/Aliases**

There are several similar approaches used to investigate the global business environment within which an organisation operates. The most commonly used approaches to external environment analysis are:

- **PEST** (political, economic, socio-cultural, technological);
- **PESTEL** (political, economic, socio-cultural, technological, environmental (or ecological), legal);
- **PESTLIED** (political, economic, socio-cultural, technological, legal, international, environmental (or ecological), demographic);
- **STEEPLE** (socio-cultural, technological, environmental (or ecological), economic, political, legal, ethical).

Description of the technique

PESTLE analysis provides a framework for investigating and analysing the external environment for an organisation. The framework identifies six key areas that should be considered when attempting to identify the sources of change. These six areas are:

Political: Examples of political factors could be a potential change of government, with the corresponding changes to policies and priorities, or the introduction of a new government initiative. These may be limited to the home country within which the organisation operates, but this tends to be rare these days since many changes have an effect in several countries. The development of bodies such as the European Union and the growth of global trade and multinational organisations have changed the scope of political activity. This has increased the possibility of political issues arising that may impact upon the organisation and how it operates.

Economic: Economic factors may also be limited to the home country, but as global trade continues to grow, economic difficulties in one nation tend to have a broad, often worldwide, impact. Examples of economic factors could be the level of growth within an economy, or market confidence in the economies within which the organisation operates. The 2008 sub-prime mortgage crisis in the USA, with its subsequent worldwide impact, is a good example of an economic situation that affected many organisations.

Socio-cultural: Socio-cultural factors are those arising from customers or potential customers. These changes can often be subtle, and they can be difficult to predict or identify until there is a major impact. Examples could be demographic issues such as an increase in the number of working mothers, or consumer behaviour patterns such as the rise of disposable fashion.

Technological: This area covers factors arising from the development of technology. There are two types of technological change: there can be developments in IT, and there can be developments in technology specific to an industry or market, for example enhancements to manufacturing technology.

IT developments can instigate extensive business impacts, often across industries or business domains and on a range of organisations. It is often the case that there is a failure to recognise the potential use of the technology – at least until a competitor emerges with a new or enhanced offering. For example, increased functionality of mobile technology or extended bandwidth for internet transactions can present opportunities to many organisations. However, the identification of such technological advances is critical if an organisation is to recognise the potential they offer.

Legal: It is vital to consider factors arising from changes to the law, since the last decade has seen a significant rise in the breadth and depth of the legal regulations within which organisations have to operate. Legal compliance has become such an important issue during this period that many business analysis assignments have been carried out for the purpose of ensuring compliance with particular laws or regulations. Some legal issues may originate from the national government but others, for example EU laws or global accounting regulations, may operate across a broader spectrum. One key issue when considering the legal element of the PESTLE analysis is to recognise laws that have an impact upon the organisation even though they originate from countries other than that in which the organisation is based. This situation may occur where an organisation is operating within the originating country or working with other organisations based in that country. Recent examples of this have concerned changes to international financial compliance regulations,

such as the Sarbanes–Oxley Act in the USA and the Basel II Accord.

Environmental (or Ecological): Examples of factors arising from concerns about the natural environment, in other words the ‘green’ issues, include increasing concerns about packaging and the increase of pollution.

Using PESTLE analysis

The PESTLE analysis technique is usually used in a meeting or workshop where several ideas and opinions can be sought. Representatives from a range of functions should be present so that they can provide specialist information. For example, legal representatives would be able to provide information about changes to relevant laws and regulations. It is a good idea for departmental representatives to research any aspects that may impact the organisation prior to carrying out a PESTLE analysis. This could involve obtaining reports from research providers such as Dun and Bradstreet or Gartner.

The PESTLE technique is straightforward to use. Typically, each element will be considered in turn and any potential issues for that area documented. Once all of the elements have been considered, the factors listed are evaluated in order to identify those most likely to affect the organisation. This results in a list of key external influences that could cause it to take action – either to gain from an opportunity that appears to be present or to ensure that any threats are removed.

When using the PESTLE technique it is important to recognise that we are looking for factors that fit two criteria: they are outside the sphere of influence (i.e. control) of the organisation, and they will have some level of impact upon it.

It is essential to appreciate the importance of these criteria when using the technique. A common error is to identify a potential course of action for the organisation rather than highlight an external factor that will have an impact upon it. These external factors are shown as opportunities and threats in a SWOT analysis (see Technique 6), so when using PESTLE the focus should be on identifying external factors and not on deciding what to do about them. That analysis comes later. For example, in a retail enterprise:

- Environmental factors concerning the use of plastic carrier bags threaten to damage the market perception of the company, and thus constitute a threat to the business. This would be included in a SWOT analysis.
- Charging for plastic carrier bags is a possible response to the threat. This is neither an opportunity nor a threat, and would not be included in a SWOT analysis.

It is important to recognise the difference here, since leaping from a threat to a quick solution is not effective strategic analysis, and could lead to simplistic, ineffective solutions.

Another important aspect to recognise when using PESTLE is that its objective is to identify factors that could affect the organisation. It is therefore of little benefit to spend time considering whether a government initiative should be filed under

‘Political’, or whether ‘Legal’ would be preferable. The technique is invaluable in identifying factors to be considered, and if possible to be dealt with by taking action. The categorisation of these factors has little, if any, value.

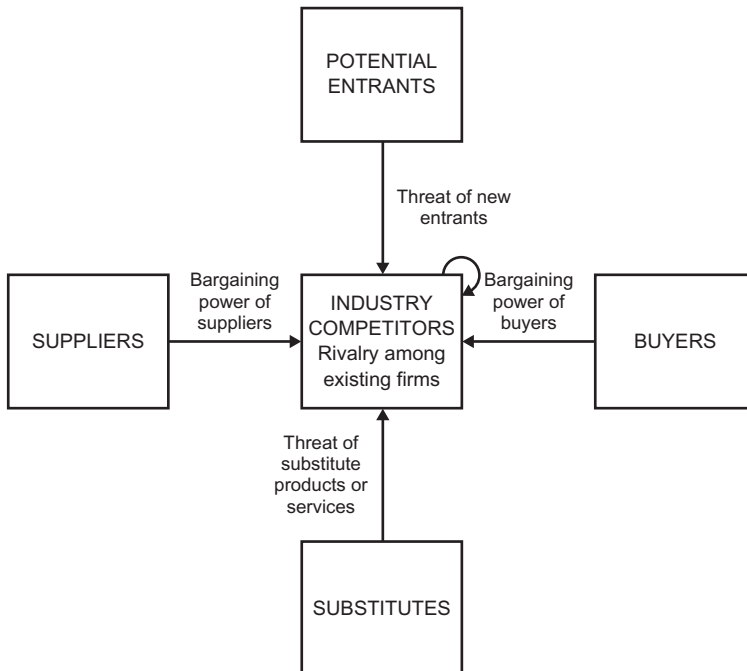
Although the technique is usually seen as one where the external environment is considered, PESTLE may also be used to analyse influences operating within an organisation. This situation arises where issues or ideas concerning a particular function or department are under examination. An analysis of the external factors that may impact upon that department can help in a number of ways, from clarifying reasons for change to identifying options. For example, if a PESTLE analysis is carried out with regard to the human resources (HR) department there may be factors within the wider organisation that fit our two criteria – they are outside the department’s control and are likely to impact upon its work. Perhaps there have been poor company results and the finance department has recommended to senior management that recruitment and training should cease for a six-month period. This decision will affect the work, but will be outside the control, of the HR department so it is an external factor to the department but an internal factor to the business as a whole.

Technique 2: Porter’s Five Forces framework

Description of the technique

Porter’s Five Forces analysis is also used to consider the external business environment, but it has a different focus from that of the PESTLE analysis.

Figure 1.1 Porter’s Five Forces framework



This technique examines the business domain or industry within which an organisation operates, and identifies the business pressures that may be brought to bear upon that organisation. The analysis derived from using the five forces framework is usually applied to a suite of products or services delivered by an enterprise.

Michael Porter divided the potential sources of pressures within an industry into five categories. These categories are set out in Figure 1.1, and the factors to consider in each case are described below.

Industry competitors:	What is the level of competition for the products or services in this industry? Is the organisation in a good competitive position or is it a minor player? Are there several competitors that hold the power in the industry?
New entrants:	Are there barriers to entry, such as the need for large amounts of money or expertise? Is it possible to start up an organisation offering these products or services without much financial support? What is the likelihood of new entrants coming into the industry?
Substitutes:	What is the range of substitutes available? What is the position of the organisation when compared to the suppliers of these substitutes?
Buyers:	How much choice do buyers have? Can they switch suppliers easily? Do they have the power in the relationship or are they locked in to the supplier?
Suppliers:	How many suppliers are available? Is this a competitive situation where the organisation has a choice of suppliers? Do the suppliers have the power in the relationship because they operate in an area of limited supply?

The answers to these questions help to identify the factors within the industry or business domain that have the potential to impact upon the organisation, either positively or negatively.

Using Porter's Five Forces analysis

The first step in using this technique is to decide which industry or business domain the organisation operates within; this decision is extremely important when using the technique, as the results will vary considerably depending on the industry at the heart of the analysis. For example, if we are analysing a company selling expensive handbags, and we ask what industry this company operates in, it is possible to look at the question from two points of view:

- We could consider the company to be in the business of designing, marketing and selling handbags. In this case, the competitors are the other handbag companies, and the substitute products would include other products used to carry personal items – such as rucksacks and even plastic carrier bags. The industry is limited to products of a particular nature: bags.

- We could consider the company to be in the business of providing luxury giftware. In this case the competitors still include the other handbag companies, but they also include companies selling other luxury goods such as perfume and jewellery. The list of substitutes could extend to glassware or even donations to charity. Looked at like this, the industry is much larger, the potential market greater and the range of pressures that may impact upon the company more extensive.

Once the industry has been decided upon, the five categories are examined to identify the pressures that exist between the organisation and each of them.

- Industry competitors:** This is an examination of the other companies operating within the industry and the level of competition between them. Does our handbag company hold a powerful position or is it a minor player that is vulnerable to competitive moves?
- New entrants:** Could organisations operating in other, similar industries move into this area? For example, could an existing fashion company decide to develop a range of designer handbags? How great are the barriers to entry into this industry, and will they deter potential entrants?
- Substitutes:** As discussed above, what business pressures will arise from possible substitute products such as rucksacks?
- Buyers:** This could be an interesting area to explore for the handbag industry, as some high quality manufacturers restrict the sales outlets for their products and minimise the opportunities for buyers to shop around and compare prices. If this is a particularly desirable brand, the power of the buyer could be extremely limited.
- Suppliers:** Again, this could be an interesting aspect because some fashion brands are very exclusive and have a lot of power over their suppliers.

The answers to these questions help to identify the factors that have the potential to impact upon the organisation either positively or negatively. In this example we could identify that there are pressures, or threats, from competitors and new entrants, whereas the relationships with the buyers and the suppliers are in the company's favour – these present opportunities.

Five forces analysis requires knowledge about the industry and the different organisations or individuals that participate in its work. Areas such as substitute products can be difficult to analyse, and possible substitutes can be missed. At one time some industries had high barriers to entry because of the financial requirements, so new entrants were considered unlikely. However, the rise of businesses with access to funds, such as the major supermarkets, has meant that high financial requirements may not deter new entrants.

INDEX

- acceptance criteria definition 188–192
- activity sampling *see* sampling
- Agile development approach 30, 167–168, 171–173, 202–203
- Ansoff's Box *see* Ansoff's matrix
- Ansoff's matrix 16–17
- ARCI charts *see* RASCI charts
- Arlow, J 57, 221

- background reading *see* background research
- background research 63–64
- Balanced Business Scorecard (BBS) 22–24
- BAM *see* business activity modelling
- BATNA (Best Alternative to a Negotiated Settlement) 89
- BCG matrix *see* Boston Box
- benefit-cost analysis (BCA) *see* cost-benefit analysis
- benefits management 244–248
- benefits realisation 244, 248–250
- Bennis, W 231
- Boston Box 12–14
- Boston Consulting Group matrix *see* Boston Box
- Bradley, G 141, 244, 250
- brainstorming 35, 89, 125
- Branson, R 233–234
- business activity modelling (BAM) 75–78
- business analyst (BA)
 - role and responsibilities 1
- business case preparation
 - cost-benefit analysis 133–141, 254–255
 - impact analysis 141–143
 - investment appraisal 146–151
 - risk analysis 143–146
- business case presentation 154–155
 - practical points 155
 - report creation 151–154
- business change report creation 151–154
 - practical points 153–154
- business change
 - four-view model 20–21, 121
 - McKinsey 7-S model 17–20
- business change identification
 - gap analysis 118–121
- business culture 230–235

- business environment
 - organisation diagram 98–100, 254
 - PESTLE analysis 3–6
 - Porter's Five Forces framework 6–8
- business event analysis 101–105
 - context diagram 102–103
 - examples of business events 104
- business process analysis
 - business event analysis 101–105
 - business process modelling 105–110, 253
 - business rules analysis 110–112
 - decision tables 112–116, 117, 118
 - decision trees 116–118
- business process modelling 105–110, 253
 - documenting tasks 107–108
 - hierarchical numbering system 107, 108
 - performance measures 109–110
 - rationalising process models 108–109
- business process triggers *see* business event analysis
- business rules analysis 110–112
- Buzan, B 56
- Buzan, T 56, 57

- cash cow *see* Boston Box
- CATWOE (customer, actor, transformation, world view, owner, environment) 71–74, 253
- CBA *see* cost-benefit analysis
- change management *see* benefits management; benefits realisation; organisational change; people change
- Checkland, P 53, 72
 - Soft Systems methodology 53, 74
- class modelling 219–225
 - reflexive association 222–223
- Cockburn, A 205, 208
- concept maps *see* mind maps
- conceptual modelling *see* business activity modelling
- conflict
 - BATNA (Best Alternative to a Negotiated Settlement) 89
 - principled negotiation 87–89
 - requirements negotiation 183–184
 - Thomas-Kilmann conflict mode instrument 84–86

- conscious competence model 242–244
- constraints analysis *see* business rules analysis
- context diagram 57–59
 - business event analysis 102–103
 - example 58
- corporate culture 230–235
- cost-benefit analysis (CBA) 133–141, 254–255
 - features distinct from benefits 135
 - intangible benefits 139–140
 - intangible costs 137–138
 - one-off or initial tangible costs 135–137
 - ongoing tangible costs 137
 - tangible benefits 138–139
 - types of cost and benefit 134–135
 - using 140–141
- critical success factors (CSFs) 21–22
- CRUD (create, read, update and delete) matrix 225–227
 - completeness check 194, 228
- cultural analysis 230–235

- Daniel, E 141, 244
- data modelling
 - class modelling 219–225
 - entity relationship modelling (ERM) 211–219
- DCF *see* discounted cash flow
- Deal, T E 230–231
- decision tables 112–116, 117, 118
- decision trees 116–118
- DeMarco, T 57
- desk checking
 - requirements validation 197
- discounted cash flow (DCF) 148–150, 151
- document analysis 51–53
 - example document specification form 52
- documentation
 - context diagram 57–59
 - mind maps 37, 55–57, 254
 - requirements documentation 184–188
 - rich pictures 36, 53–55
 - scenarios 161
 - workshops 36–37
- dog *see* Boston Box
- DSDM/Atern 30, 167, 202

- economy
 - PESTLE analysis 4
- entity relationship diagrams (ERDs) *see* entity relationship modelling (ERM)
- entity relationship modelling (ERM) 211–219
 - exclusive relationship 215
 - extended date model 214
 - many-to-many recursive relationship 215
 - many-to-many relationship 213
 - named relationships 216
 - one-to-many relationship
 - between entities 212
 - optional relationship 213
 - recursive relationship 214–215
 - resolved many-to-many relationship 213–214
 - separated exclusive relationship 216
- environment
 - PESTLE analysis 5
- ERM *see* entity relationship modelling
- ethnographic study 40–41
- facilitated workshops *see* workshops
- feasibility analysis 128–131, 132–133
 - business issues 129–130
 - elements of feasibility 128
 - financial issues 131
 - technical issues 130–131
- Fisher, R 87, 89
- force-field analysis 132–133
- four-view model 20–21, 121
- gap analysis 118–121
- Handy, C 231, 235
- Harmon, P 98
- Hofstede, G 231–232, 235
- Honey, P 239, 241–242
- hothousing 171–173
- IBM Joint Application Development Workshops™ 30
- impact analysis 141–143
 - examples of impacts 141–143
- influence/interest grid *see* power/interest grid technique
- inspections
 - requirements validation 198
- internal rate of return (IRR) 150, 151
- interviewing 26–30, 254
- investigative techniques
 - documenting the results
 - context diagram 57–59
 - mind maps 37, 55–57, 254
 - rich pictures 36, 53–55
 - qualitative investigation
 - interviewing 26–30, 254
 - observation 39–42
 - workshops 30–39, 254
 - quantitative investigation
 - document analysis 51–53
 - questionnaires 42–46
 - sampling 46–49
 - special-purpose records 49–51
- investment appraisal 146–151
 - discounted cash flow (DCF) 148–150, 151
- internal rate of return (IRR) 150, 151
- net present value (NPV) 148–150, 151
- payback (breakeven) analysis 147–148
- Johnson, G 232–233
- Joint Application Development (JAD) Workshops™ 30
- joint requirements planning workshops *see* workshops
- Kaplan, R S 23
- Kennedy, AA 230–231
- key performance indicators (KPIs) 22
- Kolb, D A 239
- Kolb cycle 239–241
- Kurt Lewin's model of organisational change 235–237
- learning cycle 239–242
- learning styles 241–242
- legal issues
 - business rules analysis 110–112
 - PESTLE analysis 4–5
- Lewin, Kurt
 - organisational change model 235–237
- logical activity modelling *see* business activity modelling
- logical data modelling (LDM) *see* entity relationship modelling (ERM)
- McKinsey 7-S model 17–20
- managing change *see* benefits management; benefits realisation; organisational change; people change
- markets
 - Ansoff's matrix 16–17
- Maslow, A 242
- mind maps 37, 55–57, 254
 - example 56
- MoSCoW (must have, should have, could have, want to have but won't have this time round) prioritisation 176–180, 255
- MOST (mission, objectives, strategy, tactics) analysis 9–10
- Mumford, A 239, 241–242
- negotiation
 - BATNA (Best Alternative to a Negotiated Settlement) 89
 - conflict analysis 183–184
 - principled negotiation 87–89
 - Thomas-Kilmann conflict mode instrument 84–86
- net present value (NPV) 148–150, 151
- Neustadt, I 57, 221
- Norton, D P 23
- object class modelling *see* class modelling
- observation 39–42
 - Heisenberg principle 41
 - practical issues 41–42
- online surveys 46
- options evaluation
 - business case presentation 154–155
 - report creation 151–154
- feasibility analysis 128–131, 132–133
- force-field analysis 132–133
- identifying options 124–125
- incremental options 126–127
- PESTLE analysis 127–128
- preparing a business case
 - cost-benefit analysis 133–141, 254–255
 - impact analysis 141–143
 - investment appraisal 146–151
 - risk analysis 143–146
 - shortlisting options 125–133
 - SWOT analysis 127
- options identification 124–125
- organisation charts 64
- organisation diagram 98–100, 254
 - example 100
 - stakeholder identification 64
- organisation modelling
 - organisation diagram 98–100, 254
 - value chain analysis 95–98
 - value proposition analysis 92–95
- organisational change
 - cultural analysis 230–235
 - Kurt Lewin's model 235–237
- P/I grid *see* power/interest grid technique
- PARADE *see* CATWOE
- payback (breakeven) analysis 147–148
- peer reviews
 - requirements validation 197
- people change
 - conscious competence model 242–244
 - learning cycle 239–242
 - SARAH model 237–239
- performance measurement
 - Balanced Business Scorecard (BBS) 22–24
 - business processes 109–110
 - critical success factors (CSFs) 21–22
 - key performance indicators (KPIs) 22
- PEST *see* PESTLE analysis
- PESTEL *see* PESTLE analysis
- PESTLE (political, economic, socio-cultural, technological, legal, environmental) analysis 3–6
 - evaluating options 127–128
- PESTLIED *see* PESTLE analysis
- PLUME (productivity, learnability, user satisfaction, memorability, error rates) 191
- politics
 - PESTLE analysis 3
- Porter, M E 7, 19, 95
- Porter's Five Forces framework 6–8
- portfolio management
 - Boston Box 12–14
- power/impact grid technique 71
- power/interest grid technique 66–71
- principled negotiation 87–89
- prioritisation
 - MoSCoW prioritisation 176–180, 255
- problem child *see* Boston Box
- process maps *see* business process modelling

- products
 - Ansoff's matrix 16–17
- project managers
 - role 1
- project structures 64
- protocol analysis 40
- prototyping 167–171
 - advantages 170–171
 - categories 169
 - disadvantages 171
- quantitative investigation
 - document analysis 51–53
 - questionnaires 42–46
 - sampling 46–49
 - special-purpose records 49–51
- questionnaires 42–46
 - design 43–45
 - issues 45–46
- RACI charts *see* RASCI charts
- RASCI (responsible, accountable, supportive, consulted, informed) charts 78–80
 - sample 79
- record sampling *see* sampling
- regulation
 - business rules analysis 110–112
 - PESTLE analysis 4–5
- report analysis *see* background research
- report writing
 - business case report creation 151–154
- requirements analysis
 - MoSCoW prioritisation 176–180, 255
 - requirements organisation 180–184
 - timeboxing 173–176
- requirements catalogue 186–188, 189
- requirements definition 157–158
 - see also* requirements analysis; requirements development; requirements elicitation; requirements modelling
- requirements development
 - acceptance criteria definition 188–192
 - requirements documentation 184–188, 189
 - requirements management 198–203
 - requirements traceability matrix 203–205
 - requirements validation 192–198
- requirements documentation 184–188, 189
- requirements elicitation
 - hothousing 171–173
 - prototyping 167–171
 - scenarios 160–165, 254
 - storyboarding 165–167
 - workshops 37
- requirements management 198–203
 - baselining 200
 - configuration control 201
 - configuration identification 200–201
 - requirements modelling
 - class modelling 219–225
 - CRUD matrix 225–227
 - entity relationship modelling 211–219
 - use case descriptions 208–211
 - use case diagrams 205–208, 253–254
- requirements organisation 180–184
- requirements specification 185–186
- requirements structuring 181
- requirements traceability matrix 203–205
- requirements validation 192–198
 - checks 193–198
 - definition 192
 - inspections 198
 - peer reviews and desk checking 197
 - technical reviews 198
 - techniques for undertaking checks 193
 - walkthroughs 198
- requirements verification
 - definition 192
 - techniques for undertaking checks 193
- resource analysis *see* Resource Audit
- Resource Audit 10–12
- rich pictures 36, 53–55
 - example 54
- risk analysis 143–146
- risk assessment 144–145
- risk identification 144
- risk management *see* risk analysis
- root definition 74
- Rumsey, D 48
- sampling 46–49
 - preparation 46–49
- SARAH (shock, anger, rejection, acceptance, hope) model 237–239
- scenarios 160–165, 254
 - defining requirements 190
 - documentation 161
 - example 161–162
 - scope 160–161
 - uses of 164
- Scholes, K 232–233
- Schwaber, K 167
- Scrum 30, 167, 202–203
- semantic networks *see* mind maps
- shadowing 40, 42
- silo thinking 101
- socio-cultural issues
 - cultural analysis 231–232
 - PESTLE analysis 4
- special-purpose records 49–51
 - disadvantages 50
- stakeholder analysis
 - business activity modelling 75–78
 - CATWOE 71–74, 253
 - power/impact grid 71
 - power/interest grid 66–71
 - RASCI charts 78–80
 - root definition 74
 - using the techniques 80–81
- stakeholder identification
 - background research 63–64
 - external stakeholders 66
 - internal stakeholders 66
 - organisation diagram 64
 - stakeholder nomination 63
 - stakeholder wheel 64–66
- stakeholder management
 - BATNA (Best Alternative to a Negotiated Settlement) 89
 - principled negotiation 87–89
 - stakeholder management
 - planning 81–84
 - Thomas-Kilmann conflict mode instrument 84–86
 - using the techniques 89–90
 - stakeholder management planning 81–84
 - example of a plan 84
 - stakeholder map *see* stakeholder management planning
 - stakeholder nomination technique 63
 - stakeholder wheel 64–66
 - illustration 65
- star *see* Boston Box
- STEEPLE *see* PESTLE analysis
- storyboarding 165–167
- strategy analysis techniques
 - external business environment
 - PESTLE analysis 3–6
 - Porter's Five Forces framework 6–8
 - internal capability
 - Boston Box 12–14
 - MOST analysis 9–10
 - Resource Audit 10–12
 - strategy definition
 - Ansoff's matrix 16–17
 - SWOT analysis 14–16, 255
 - strategy implementation
 - four-view model 20–21
 - McKinsey 7-S model 17–20
 - see also* performance measurement
- STROBE (STRUCTURED Observation of the Business Environment) 40, 41
- structured observation 40, 41
- Structured Systems Analysis and Design Method (SSADM)
 - context diagrams 57
 - notation 211–217
- surveys *see* questionnaires
- swimlane diagrams *see* business process modelling
- SWOT (strengths, weaknesses, opportunities, threats) analysis 14–16, 255
 - evaluating options 127
- system event analysis *see* business event analysis
- systemic analysis *see* business change identification; business process analysis; organisation modelling
- technical reviews
 - requirements validation 198
- technology
 - PESTLE analysis 4
 - theory of learning styles 241–242
 - Thomas-Kilmann conflict mode instrument 84–86
- three-view model *see* four-view model
- timeboxing 173–176
- timesheets *see* special-purpose records
- TOWS analysis *see* SWOT analysis

- Unified Modeling Language (UML)
 - class modelling 219–225
 - context diagram 57
- Ury, W 87, 89
- use case descriptions 205–206, 208–211
- use case diagrams 205–208, 253–254

- value chain analysis 95–98
- value proposition analysis 92–95
- Virgin Atlantic Airlines
 - cultural web 232–233
- VMOST *see* MOST analysis
- VOCATE *see* CATWOE

- walkthroughs
 - requirements validation 198
- Ward, J 141, 244
- webs *see* mind maps
- Welch, J 135
- Welch, S 135
- wild cat *see* Boston Box
- Wood, M 48
- work measurement *see* sampling
- workflow model *see* business process modelling
- workshops 30–39, 254
 - assumption reversal 36
 - brainstorming 35, 125
 - choice of techniques 38
 - columns and clusters 35–36
 - conduct of 32

- discovery techniques 35–36
- documentation techniques 36–37
- follow up 32
- greenfield site 36
- hothousing 171–173
- ice-breaking techniques 34
- issues with 37–39
- planning 30–31
- post-it exercise 35, 36
- roles 33–34
- round robin 35
- talking-wall 36
- transporter 36
- venue 38

- Yourdon, E 57

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James Cadle has been involved in the field of business systems for over thirty years. Debra Paul jointly edited the best-selling BCS publication *Business Analysis* (2006). Paul Turner specialises in the provision of training and consultancy in the areas of Business Analysis and Business Change.

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