Business Analysis is the discipline of identifying business needs and formulating workable solutions to business problems. The development of business analysis as a profession has extended the role and responsibilities of the business analyst who now needs the widest possible array of knowledge, skills and tools to be able to use each when and where it is needed. This excellent book provides a comprehensive single source of 72 possible techniques and applies them within a framework of stages.

- 72 key techniques
- Practical advice to suit all situations
- Of huge benefit to business analysts and managers
- Of great value to students of information systems and business strategy

**ABOUT THE AUTHORS**

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.

You might also be interested in:

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Debra Paul, Donald Yeates and James Cadle (Editors)
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James Cadle has been involved in the field of business systems for over thirty years, first with London Transport, then with Sema Group and most recently with Assist Knowledge Development, of which he is a director. He has conducted methods studies and business improvement projects, and has led teams developing and maintaining corporate IT systems.

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Paul has a particular interest in the way the job role of the business analyst changes in an Agile development environment. He is a Fellow of BCS and has worked extensively with a range of organisations to raise the profile of professionalism within the business analysis discipline.
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, Weltanschauung 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  mission, objectives, strategy and tactics (analysis)
(analysis)
NPV  net present value
PESTLE  political, economic, socio-cultural, technological, legal and (analysis)
environmental (or ecological) (analysis)
PIR  post-implementation review
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<td>responsible, accountable, supportive, consulted and informed (charts)</td>
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<td>return on investment</td>
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<td>SARAH</td>
<td>shock, anger, rejection, acceptance and hope (model)</td>
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<td>SSADM</td>
<td>Structured Systems Analysis and Design Method</td>
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<td>STROBE</td>
<td>STRuctured Observation of the Business Environment</td>
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<td>SWOT</td>
<td>strengths, weaknesses, opportunities and threats (analysis)</td>
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<td>Unified Modeling Language</td>
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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.

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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
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.
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