12

STRUCTURED PROBLEM DIAGNOSIS

INTRODUCTION

The *formal* hiring reasons for management consultants concern solving the client's problem. The question arises: how do consultants solve problems? Different consultants may use different problem solving methods. The structured problem solving method is the hallmark of the world's top tier management consultancy firms, such as McKinsey & Company, the Boston Consulting Group, Bain & Company, Booz & Co, Roland Berger Strategy Consultants, and A.T. Kearney. This Chapter 12 and Chapter 13 are indicative of the problem solving approach as used by these top tier firms. These chapters provide a step-by-step guide to the structured problem solving method. We illustrate the method with two running cases. Structured problem solving consists of problem diagnosing and solution development. Problem diagnosis (Chapter 12) translates a client problem into a single question. Solution development (Chapter 13) is about answering that question. Consultants have to communicate their recommended solution to the client in order to get a decision to implement this solution (Chapter 14). Finally, consultants may assist the client with implementation of the solution to help the client achieve the desired result (Chapter 15). Figure 12.1 outlines this process, which runs from problem to result. This chapter closes with a summary, reflective questions, a running case study, suggestions for further reading, and references.

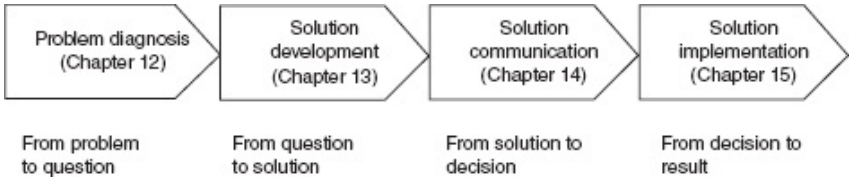

FIGURE 12.1 *An overview*

Main learning objectives

- Understand the reasons for structured problem solving.
- Understand the differences between analysing problems and analysing opportunities.
- Understand the result gap concept.
- Understand the principles of logical structuring.
- Know how to decompose a result gap in driver gaps.
- Know how to segment a result gap.
- Know how to structure the possible causes of a result gap.
- Understand abductive reasoning.
- Know how to test a possible cause.
- Know how to formulate a key question in the consultancy project.
- Know how to develop a problem statement.

THE PEOPLE SIDE OF PROBLEM SOLVING

This book explains structured problem solving as practiced by the top consultants. Its focus is on the method and the techniques. Real life problem solving on a consultancy project, however, is not just about methods and techniques. It is not like solving a case in business school. You do not receive a case pack with all the facts you need. There is no (friendly) professor who leads the case discussion in class. It is not cracking the case in a job interview for a consultancy firm either.

Dropped behind enemy lines

Consultants doing problem solving in real life projects are more likely to resemble elite troops operating behind enemy lines. Elite soldiers are dropped in hostile territory to execute a difficult mission under high time pressure. Management consultants are also parachuted into an unfamiliar environment. They are outsiders in the client organization. The consultants all of a sudden then invade the territory of the client organization members. As a consultant you should not expect that you will be received with open arms by the client members. Some client employees have good reasons to fear the arrival of consultants. In particular, if the client top management want the consultants to increase cost competitiveness, read ‘reduce employment’. In such projects, client members may be uncooperative or even hostile. Some might even try to (secretly) sabotage the consultants’ activities.

More than problem solving

Even if the instruction to the consultants is not about cost reduction, client members may still be reserved and uncommunicative towards the consultants. Consultancy projects are typically associated with uncertainty. Even client members that may expect to benefit from the arrival of consultants do not know for sure what outcome the consultancy project may lead to. Problem solving in a consultancy setting is not only about the problem but also about the people. Consultants not only have to be good at problem solving, they also have to be sensitive to people issues and possess good interpersonal skills. They have to be very good at communication. Moreover, consultants need mental toughness to deal with the stress and frustration that these people issues may cause.

APPROACHES TO PROBLEM SOLVING

Structured problem solving as practiced by the world's top tier management consultants is a systematic approach that requires a fair amount of discipline, as this book will make clear. You may ask yourself: why do the world's top tier consultants make the effort? What is wrong with other approaches to problem solving? We distinguish between three extreme alternatives (see Figure 12.2).

Guessing

One extreme option is what we call 'guessing'. This type of problem solving is solely based on creativity. It lacks analysis. It is an intuitive approach based on gut feeling. There is no testing of ideas. Solutions are implemented without testing them, which makes this a risky form of problem solving.

Analysing

A second extreme option is the complete opposite of guessing. This type of problem solving relies only on analysis. There is no place for creativity. It is driven by frameworks instead of focusing on the problem. The problem solver wants to use as many (text book) frameworks as possible. Analysis is an end instead of a means to an end (which should be problem solving). Therefore, this option is like 'boiling the ocean'.

Experience

The third extreme is experience-based problem solving. This method is neither based

on creativity nor on analytical frameworks. Instead the solution is based on the problem solver's experience. The problem solver has seen the problem, or at least that is what they think. They have solved the problem before and already know the solution. The risk inherent to this approach is that the problem solver may err on the problem identification. They think that they have defined the problem correctly, but this problem may not be the real problem. They may focus on the wrong problem because they are relying on experience rather than on analysis of the problem at hand.

Advantages of structured problem solving

Figure 12.2 positions structured problem solving vis-à-vis the three extreme alternatives. Structured problem solving combines the best of all worlds. The structured problem solving method always focuses on the problem, not on analytical frameworks, thereby avoiding 'boiling the ocean'. Structured problem solving verifies the problem, thus avoiding a focus on the wrong problem. It uses creativity and experience to develop hypotheses about possible solutions. However, the structured problem solving method prescribes that all hypotheses are tested (that is the underlying assumptions of the hypothesis are analysed) before the solutions are recommended.

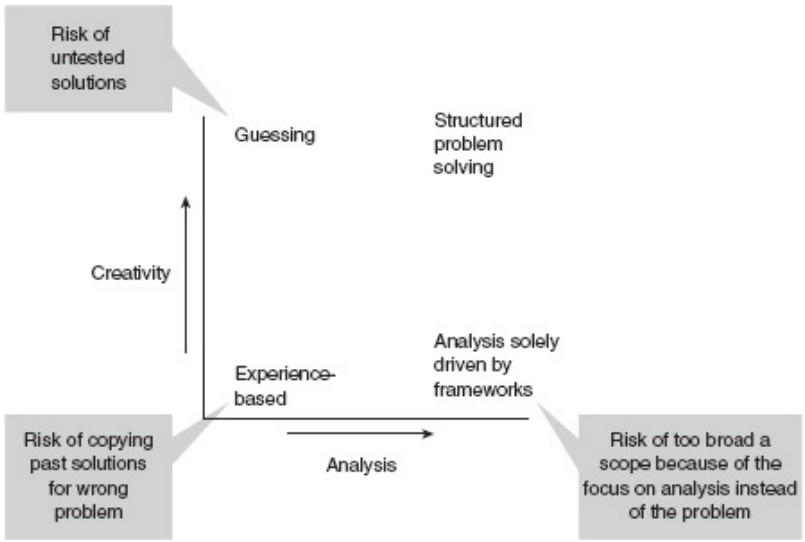

FIGURE 12.2 *Some problems with problem solving*

WHAT IS A PROBLEM?

Defining the client's problem

What is the client's problem? Many people may consider it a superfluous question.

The client has already defined their problem. ‘We have a cost problem’. Or ‘Our culture has become a problem’. Or ‘We need a new strategy’. In cases where the client has not yet defined the problem, then it may be obvious to the consultants what the client’s problem is. ‘This is a restructuring problem’. Or ‘The client lacks competitiveness’. Or ‘Productivity is a problem’.

Such definitions are not good enough for the world’s top tier consultants. These statements are too vague to form a foundation for a top tier consultancy project. Moreover, if clients have defined the problem, how do the consultants whether know this definition is correct? Consultants should not take the client’s definition of the problem for granted. The client may be unaware of the real problem, or they may have an interest to hide the real problem from the consultants (see Chapter 10 concerning clients’ hidden agendas).

Why is it a problem?

For many people, determining the client’s problem seems to be a non-problem. However, these same people may find it problematic to give a definition of what constitutes a problem in general. Ask yourself: what is a problem? Some people may define problems as questions and they would be right to do so. The structured problem solving approach formulates problems in a question format. However, it is not very insightful to say that a problem is a question. Other people may define problems in categories, such as cultural problems, strategic problems, and organizational problems. You may ask: why is culture a problem? This question forces you to look at the consequences. These consequences are the basis of the definition used in the structured problem solving method of the world’s top tier consultants. Considering the consequences helps you to determine whether you have identified the right problem, instead of the wrong one.

THE RESULT GAP

The problem-owner

According to the structured problem solving method, a problem is a gap perceived by the problem-owner between the achieved result and the result that is desired by the problem-owner. A problem does not exist in a vacuum. A problem cannot exist independent of an actor, that is, a person or a group of persons, such as a management team. This actor is the so-called ‘problem-owner’. For example, the manager has achieved a profit of US$5 million, whereas the desired profit is US$6 million. Therefore, the manager faces a profit gap of $1 million. The existence of this gap represents a problem for the actor because that gap implies that the owner does not

have the result that they desire.

Closing the gap

How do we define problem solving? If we define a problem as the gap between the achieved result and the desired result of the problem-owner, then we may define problem solving as closing that result gap. The solution to the problem is a proposed action to increase the problem-owner's result from its achieved level to the desired level.

The result

EXTERNAL PROBLEM SOLVERS Management consultancy depends on the fact that some problem-owners prefer to hire external experts to solve their problems. We would acknowledge that management consultants may do more than problem solve. They may also help clients to seize opportunities. This chapter also pays attention to diagnosing opportunities.

PROBLEM-OWNERS Management consultants usually work for organizations, not individuals. Therefore, we shall only look at problem-owners which are organizations, typically represented by (higher) management of such organizations. Consultants may work both for (profit) companies and non-profit organizations.

DESIRED RESULTS The desired results of these organizations typically vary. Companies usually define their desired results in profits or in company value (publicly listed companies typically focus on shareholder value). Non-profit organizations form a highly heterogeneous population with wide-ranging desired results. For instance, hospitals may formulate results in terms of the quality and volume of their cures, while schools may define results by the percentage of graduates and how high their grades are.

Two types of result gaps

DIFFERENT REASONS We define a problem in terms of its impact on the problem-owner's result. The problem is defined as the result gap, which is the gap between the owner's achieved result and the desired result. If the owner is a company, then the result gap may be defined as the difference between the company's achieved profit and that company's desired profit. Because a result gap is the difference between the achieved result and the desired result, a gap may arise for different

reasons.

DECREASING ACHIEVED RESULT First, a result gap may arise because the achieved result has declined (see the example in the left-hand graph in Figure 12.3). Let us assume the desired result of the company in our example is $20 million. The company used to have a profit of $20 million but the profit has declined to the current (achieved) level of $9 million. The declining result is responsible for the result gap which is $11 million (20 – 19 = 11).

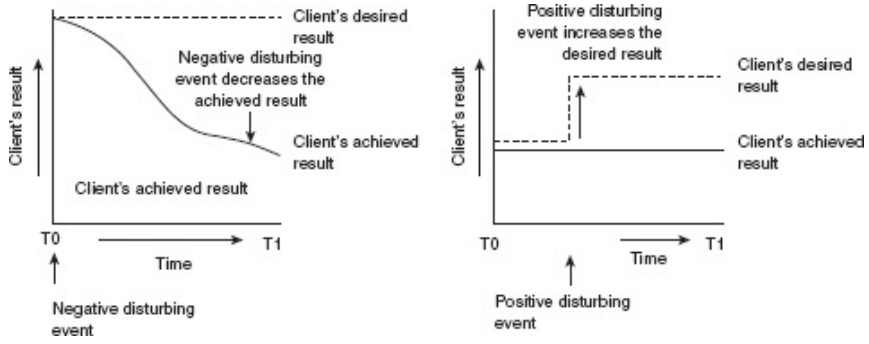

FIGURE 12.3 *Two different developments of result gaps*
Notes: T0 = time in the past. T1 = present time.

INCREASING DESIRED RESULT Second, a result gap may arise because the company raises its desired result (see the right-hand graph in Figure 12.3). Let us assume that the company in our example used to have a desired result of $20 million and that the company achieved an actual result of $20 million. Over time, the company has raised its desired result from $20 million to $28 million. However, the actual achieved result remained at $20 million. As a consequence, the company has created a result gap of $8 million (28 – 20 = 8).

Causes of result gaps

THE DISTURBING EVENT You might ask: why did the company's achieved result decrease (left-hand graph), or why did the desired result increase (right-hand graph)? At the starting point, time 'T0', the company's achieved result equalled its desired result. At that time, no result gap existed. Then something happened that caused the achieved result to decrease (left-hand graph). Or something else happened that caused the desired result to increase (right-hand graph). This 'something' is what we term the 'disturbing event'. We call this event disturbing because the event disturbs the balance between the achieved result and the desired result.

TWO TYPES OF DISTURBING EVENTS We may distinguish between two types of disturbing events. On the one hand, we have the negative disturbing events which cause the achieved result to decrease. On the other hand, we have the positive disturbing events which cause the desired result to increase. The negative disturbing events affect the achieved result. The positive disturbing events affect the desired result.

In this chapter we will discuss consultancy projects in which clients face a negative disturbing event and projects in which clients face a positive disturbing event. The distinction is relevant because the consultants' diagnostic approach varies with the nature of the disturbing event.

Existing and expected result gaps

Thus far we have discussed the result gaps that already exist. At present, the client has a gap between its present achieved result and its present desired result. Consultants may also work on expected result gaps. The client may expect a result gap to arise in the future and so hires the management consultants to help develop a solution for the expected gap. The expected gap may arise for two reasons. Either the achieved result is expected to decline, or the desired result is expected to increase. Both developments will cause a result gap in the future.

The benefits of a result focus

By defining the client's problem in terms of the result gap, the consultants make sure that they focus on the client's desired result. This result focus ensures the effectiveness of problem solving. The diagnosis of the problem will concentrate on explaining the result gap (this chapter). The solution development will concentrate on solutions that will close the result gap (Chapter 13). The result focus will prevent analysis for the sake of analysis (the trap of the approach that solely focuses on analysis: see Figure 12.3).

STRUCTURED PROBLEM DIAGNOSIS

Preparatory steps

We first explore how consultants diagnose a client's result gap that is caused by a decrease in the client's achieved result. A negative disturbing event caused a decrease in the achieved result. The client's desired result did not change.

How to approach this problem, that is: how to close the result gap? A natural inclination may be to start collecting and analysing data. We may begin with a SWOT

analysis or another popular analytical technique. However, this is not the most efficient and effective approach. The top tier consultants withstand the temptation to immediately jump into all types of analyses and thereby risk boiling the ocean. Before these consultants start analysing, they will take a couple of preparatory steps. They will lose time while taking these steps, however they will recoup this time later because their analysis in the next stage will be much more focused than that of people who dive into analysis right away.

THREE STEPS The structured problem diagnosis method of the top consultants distinguishes between three steps (see Figure 12.4):

1. What is the problem?
2. Where is the problem?
3. Why does the problem exist?

These three questions are based on ‘sequential analysis’ (Holland, 1972, cited in Minto, 1987). First, the consultants identify the result gap. This gap identification ensures that the consultants work on a real problem. Second, the consultants determine the distribution of the result gap across segments. An uneven distribution informs the consultants about where to focus their diagnosis. Third, the consultants determine the root cause(s) of the result gap. They investigate the negative disturbing event in-depth and analyse how precisely the negative disturbing event caused the result gap. If the gap is unevenly distributed across segments, then the consultants investigate the causes by segment gap. They focus on the segments with the largest result gaps.

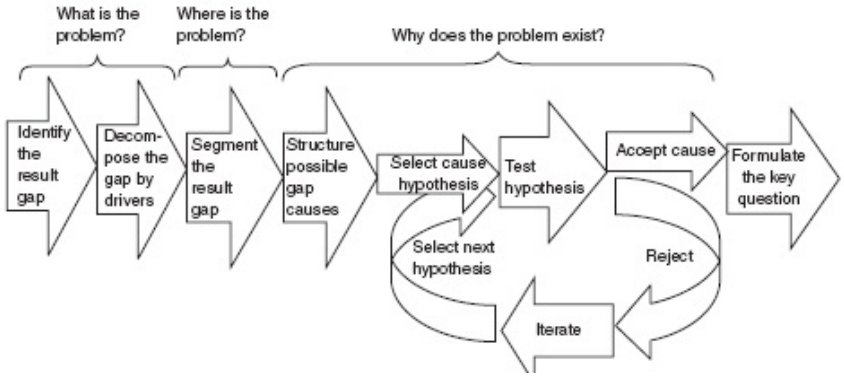

FIGURE 12.4 *The structured approach for diagnosing a problem*

Identify the result gap

DETERMINE THE CLIENT'S RELEVANT RESULT Ideally, the consultants will identify the result gap *before* the start of the consultancy project. During the initial meetings with the client, the consultants should already develop an idea of the result gap (see Chapter 10). They will develop their proposal on the basis of the result gap. The consultants need to determine the client's relevant result. What result does the client (top manager) perceive as the most relevant result? Does the client focus rest on quality, brand image, costs, revenues, market share, profit, shareholders' value, sustainability, customer satisfaction, employee satisfaction, or something else?

TAKE A CRITICAL STANCE The consultants should take a critical stance against the client's result. They should ask the client why they think this particular result is the most relevant. For instance, the client perceives market share to be the most relevant result. The consultants may ask the client why they perceive market share to be the most relevant result.

- Is market share the ultimate objective of the client?
- Why is it so important to have a high market share?
- Is market share an end in itself, or is market share a means to a higher end?

If the client answers that market share is most relevant because it leads to profit, then the consultants have achieved two things. First, they have uncovered a hidden assumption of the client, namely that market share leads to profit. Second, the consultants have uncovered an even more relevant result, namely profit. Profit is the most relevant result.

UNCOVER HIDDEN ASSUMPTIONS Market share is only relevant (to achieve profit) if it leads to profit. We would acknowledge that in general market share leads to profit. However, *developing* a higher market share does *not always* lead to a higher profit. First, developing a higher market share may be costly. The client may have to invest (heavily) in, for instance, product innovation, production facilities, and marketing. Second, the client's market may be unattractive as a result of which the client will not be able to recoup their investments. For instance, rivalry may be intense and both buyers and suppliers may be powerful. Consultants should therefore critically evaluate the relevant result that the client comes up with.

DISTINGUISH MULTIPLE RESULTS Clients may indicate more than one relevant result. Instead of a single result, they may want to achieve multiple results. In this case, consultants should investigate whether these results are related to each other in some way. Consultants need to be attentive to hierarchical relationships between

results. The previous example illustrates the hierarchical relation between market share and profit. Market share may drive profit. Therefore, market share is hierarchically subordinate to profit. If the client indicates multiple results that are hierarchically related, then the consultants should focus on the hierarchically highest result.

DEVELOP A RESULT HIERARCHY In our example, the hierarchically highest result is profit. Another example of a hierarchical relation is the relation between brand image and profit. The client may indicate that the results are defined in terms of brand image and profit. The consultants may point out that brand image is subordinate to profit. The brand image is a means not an end. Brand image is a desired result insofar as brand image contributes to profit. If investments in brand image do not result in profit increases, then brand image should not be a desired result. Instead of having two results, brand image and profit, the consultants should advise the client to concentrate on the hierarchically highest result, which is profit.

UNRELATED RESULTS Clients may have multiple results which are not hierarchically related. Consultants should investigate whether these results are related in some other – non-hierarchical – way. If the results are unrelated, then gaps for each of these results will present distinct problems. For instance, a company may want to combine profit and non-profit objectives. Examples of the latter category are corporate social responsibility projects. If the company has a gap in its profit and a gap in its non-profit and these gaps are unrelated in terms of disturbing events, then the consultants may suggest defining separate projects.

RELATED RESULTS Clients' multiple results may also be related. In this case, the consultants should approach the corresponding result gaps in an integral way. Because the results are related, the consultants cannot develop a solution for an individual result gap without considering the other result gaps. The consultants should develop solutions for all result gaps. For instance, a university indicates that quality of education and quality of research are the relevant results. Education and research relate to each other via the university faculty. The faculty is responsible for both education and research. Solutions to improve the quality of the university's education should take into account the quality of the university's research, and vice versa.

INTEGRATIVE DIAGNOSIS The consultants should diagnose the education and research gaps as an integrated client problem. Instead of a one-dimensional result gap, the client has a two-dimensional result gap, with each result representing a different dimension. Figure 12.5 visualizes a two-dimensional result gap. The client has two related results, which are X and Y. The desired results are Xd and Yd. The

achieved results are Xa and Ya. The result gap for X is Xd–Xa. For Y the result gap amounts to Yd–Ya. The client currently is in position A, which represents the client's achieved results along the two dimensions. The desired end position is D, which represents the client's desired results along the two dimensions.

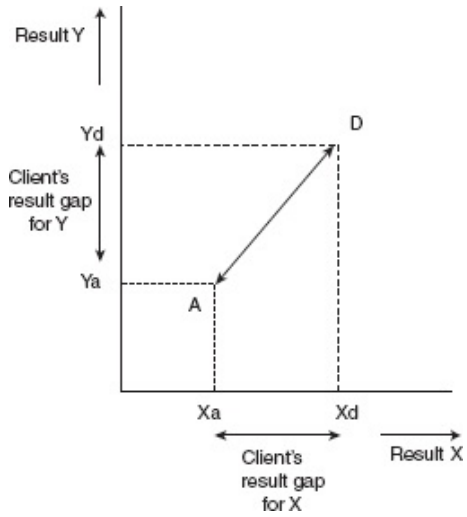

FIGURE 12.5 *A two-dimensional result gap*

Decompose the result gap by result drivers

The consultants focus on the client's hierarchically highest result in order to ensure the effectiveness of their solution. The consultants' proposed solution will address the client's highest, or ultimate, result. Consultants must avoid the trap of developing solutions for means rather than ends. Recall the example of increasing market share in an unattractive market. Solutions for increasing market share will not always increase the profit for the client. Determining the result gap at the highest level has advantages for solution development. However, it also has its drawbacks. The higher the level of the result, the more complex it becomes to diagnose the result gap. Therefore, consultants must first determine the result gap at the highest level, but subsequently decompose the result gap into a hierarchy of lower level gaps. This decomposition to lower levels makes diagnosis easier. Moreover, decomposition of the result gap provides insight into possible centres of gravity. Such centres become focus areas for the consultants.

FOCUS ATTENTION Figure 12.6 provides an example of such decomposition. CandyCorp is a producer of candy bars. The company has hired consultants to solve its profit problem. The consultants decompose the result gap by result driver. Which driver is responsible for what share of the gap? The consultants not only look at the

present result gap and its decomposition. They also consider the development of the gap over time. At what point in time did the gap emerge? How has the gap evolved since then? The consultants must also look at the development of the gaps per driver. Are these gaps increasing, stable, or decreasing?

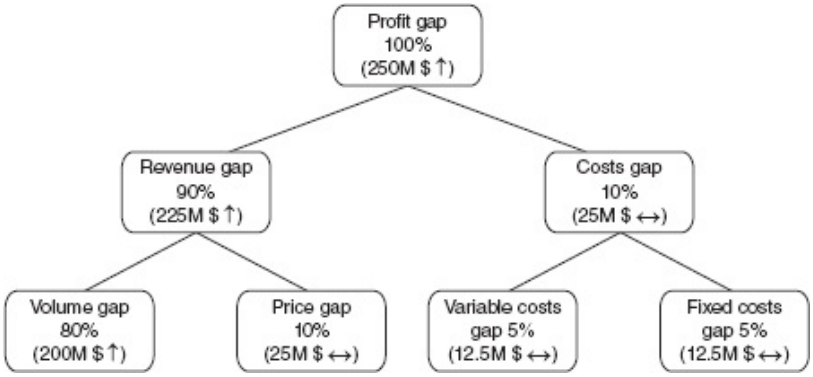

FIGURE 12.6 *Decompose a result gap in result driver gaps*

Notes: ↑ = increasing; ↔ = stable; M = million
Percentage of a low-level gap indicates what part of the profit gap is explained by that low-level gap
Revenue gap = Pd × Qd – Pa × Qa = (Pd – Pa) × Qd + (Qd-Qa) × Pa = price gap + volume gap (P = price; Q = quantity or volume; d = desired; a = achieved)

Analyse the gap

COLLECT THE DATA Figure 12.6 is a relatively simple structure. In real life consultancy projects, the consultants may have to decompose the result into even lower level drivers. For instance, they may need to decompose costs into smaller cost items. Developing the structure is one thing, collecting the data is another. The consultants need to get the data about the various result drivers from the client organization. They have to request the data from client organizational members who 'own' the data, such as the controller or financial director.

Getting the data may not be easy. The client members may be reluctant to share the data with the consultants. The data owners or other stakeholders may fear what the consultants will do with the data. The analyses of the consultants may also have unfavourable consequences for these stakeholders. Therefore, consultants may have a difficult time obtaining all the data for their result driver structure. Chapter 13 elaborates on data collection.

CHECK THE DATA Even if the consultants receive the data, they should be careful. Consultants should never accept client data without verifying them because the data may be incorrect for various reasons. First, the client members may consciously supply misleading data to put the consultants on the wrong track. They

may do so because they have their own agenda. Second, client members may supply faulty data without being aware of the errors. The data may be polluted. For instance, there may be errors in a database. For instance, by accident the wrong data may have been entered into a file. It is easy to make a typo in a spreadsheet. Furthermore, the client may have wrongly calculated data. For instance, the client may use a flawed cost allocation system. Therefore, the supplied cost data do not represent the real costs. The consultants should critically review the received data. Can these data be true? Preferably, consultants must have multiple sources of data, which allow them to compare data from different sources.

EXAMPLE The top tier consultants always strive to visualize such decomposition structures. Our example, CandyCorp (see Figure 12.6), has a profit gap, which means that the firm's achieved profit is smaller than its desired profit. As profit equals revenues minus costs, the consultants decompose the profit gap into a revenue gap and a costs gap. The consultants may find that the revenues gap for the largest part (90 per cent in Figure 12.6) explains the profit gap. The achieved costs are more or less in line with the desired costs. These findings allow the consultants to focus their attention on the revenues side. This focus will increase the efficiency and speed of the problem diagnosis process. However, the consultants may also find that the costs gap largely or fully explains the profit gap. In this case, the consultants will focus on the cost side. If the revenue gap and the costs gap are equally important to the profit gap, then the consultants need to diagnose both revenues and costs. The idea is that the consultants focus their attention in line with the importance that a lower-level gap has for the high-level result gap.

DEVELOP MORE FINE-GRAINED INSIGHTS The consultants may continue to decompose result gaps into lower-level gaps. The further decomposition may provide more fine-grained insights, which consultants may use to sharpen their focus. For instance, the consultants may decompose the revenue gap into a volume gap and a price gap. The volume gap is the difference between the number of products or services actually sold by the client and the desired number. The price gap is the difference between the achieved price and the desired price per product or service. Again, the relative importance of the result gaps determines the amount of attention that consultants should give to each gap.

BUILD A MODEL The decomposition of the result into its drivers is not only valuable for analysing the result gap. The consultants may use the structure of result drivers to build in an Excel spreadsheet an economic model of the client's business. This spreadsheet model shows how the client achieves its result. The consultants may use this model to calculate how much a possible cause contributes to the client's result

gap and how much a possible solution to the problem contributes to the client's result. To what extent does this particular cause explain the result gap? Does this particular solution really close the result gap?

The consultants may also use the model to calculate how different scenarios may affect the solution's contribution to the client's result. Such calculations can help the consultants to answer the question: how sensitive is the solution to uncertainties? Before the consultants may use the model to run possible solutions, they should first calibrate their model. They should run the model on historical data. To assure the model's quality, consultants may have their model verified by (financial) experts within the client organization, such as the controller or chief financial officer. The consultants create a transparent model. They write down all formulas and assumptions. Clear documentation of the model is critical when the consultants hand over that model to the client on completion of the project.

CONSIDER INTERDEPENDENCIES BETWEEN RESULT DRIVERS Decomposing the result into drivers helps to reduce the complexity of analysis. The consultants divide the complex high-level result metric into increasingly simple lower-level metrics. This 'divide and conquer' strategy simplifies the analysis. However, consultants should be aware of the risk of oversimplification. Oversimplification lurks because (some) result drivers may be related. Reducing the high-level result into a series of low-level results may overlook interdependencies between these low-level results. For instance, consider the decomposition of the profit gap into a revenue gap and a cost gap. The client may have a surplus of revenue and a negative cost gap. The too high cost, however, may be the reason for the revenue surplus. For instance, high quality may lead to high volume but also to high cost. Similarly, a volume gap may be related to a price gap. Because the price is too high, the volume is too low. Consultants should therefore not analyse a result gap in isolation. Instead they should consider the interdependencies between the sub gaps when exploring the causes of the overall result gap.

CASE STUDY

AcStrat Consulting – identify and decompose the result gap

The problem-owner

AcStrat Consulting is a small but prestigious management consultancy firm

which focuses on board level strategy advice. The consultancy works for the CEOs of (very) large multinational companies, mostly Fortune Global 500 members, across all industry sectors. AcStrat is organized into twenty industry practices, such as Energy, Financial Services, and Telecommunications. AcStrat only provides advice on strategy development. It refrains from strategy implementation.

The firm is privately held by its ninety partners. AcStrat employs about 630 consultants and 360 support staff. The consultancy operates from fifteen offices, which are located in nine countries, mostly in Western Europe and North America, but also some in Asia and the Middle East. Last year, the firm generated US$525 million in revenues.

Identify the result gap

What is the result gap? During the past few years, AcStrat Consulting has faced decreasing profits. Last year, the firm suffered its first loss in its thirty year history. The result gap is the difference between the current loss and the desired profit. AcStrat's managing partners decided to initiate an internal study to investigate the cause(s) of this loss and develop a solution.

An internal taskforce decomposes the profit gap in a logical structure (see Figure 12.7). They find that a decreasing volume of work (in terms of billable hours) explains most of the profit gap. Increasing indirect costs explain most of the remainder of the gap. AcStrat has held its consultancy capacity constant. Therefore, the decreasing volume of work causes a decreasing utilization of AcStrat's consultancy capacity.

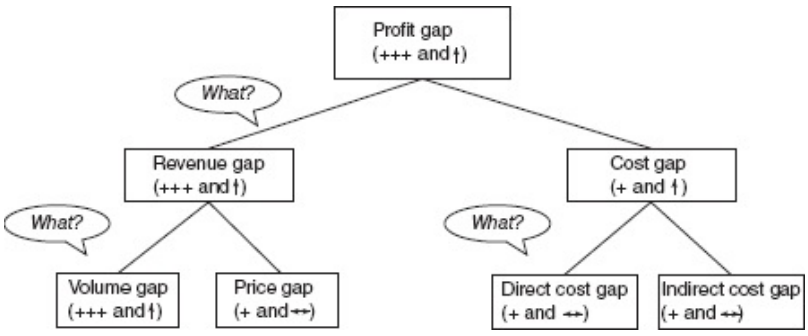

FIGURE 12.7 *Decomposing the profit gap in profit driver gaps*
Notes: The plus signs (+) indicate the size of the gap; ↑ = increasing; ↔ = stable

Segment the result gap

WHERE IS THE GAP? By now, the consultants have determined the client's result gap. We would acknowledge the co-existence of multiple result gaps (see Figure 12.5), but for clarity, we will only speak of a single result gap. The consultants have decomposed the result gap into increasingly low-level result driver gaps. Therefore, they have gained insight into the contribution of the various low-level driver gaps to the high-level gap. The question arises: how to proceed?

We may be tempted to start investigating the cause of the most important low-level result gap. We would admit the urge to develop an explanation of that result gap. However, at this stage it is not efficient to start developing such explanations. Why is this the case?

CREATE A FOCUS Diagnosing a low-level result gap may prove voluminous. The amount of diagnostic work increases with the scope of the client's activities. This scope may be measured in terms of the number of segments where the client is active. Examples of segments are products, markets, distribution channels, countries. The more segments, the more diagnostic work consultants have to do. The example of CandyCorp (see Figure 12.6) may illustrate how it works. Assume that the volume gap explains 90 per cent of the firm's profit gap. Therefore, the consultants will first investigate this particular gap. Recall that the volume gap is the difference between the achieved volume of products and the desired volume. Assume that CandyCorp has one product, which it sells in three different countries. Let us call these countries A, B, and C. In each country, CandyCorp sells its products through four different distribution channels: supermarkets, petrol stations, the hospitality channel (restaurants, hotels, bars), and vending machines. Both the countries and the channels are segments.

DETERMINE PRIORITIES The consultants want to know how the volume gap is distributed over the countries and channels. Insight in the distribution of the gap enables the consultants to determine how to focus their attention. Figure 12.8 shows how they decompose the volume gap, first by country and second by channel. The first-level decomposition, by country, shows a very uneven distribution of the volume gap. The volume gap in country A explains 70 per cent of CandyCorp's overall volume gap (the overall volume gap is 100 per cent). Therefore, the consultants first investigate country A further. They decompose country A's volume gap by channel. This decomposition also reveals an uneven distribution. The supermarkets channel explains 57 per cent (40/70) of country A's volume gap and 40 per cent of the overall volume gap. Based on these insights, the consultants determine that the supermarkets in country A are a priority for further diagnosis. To further pinpoint the area where the result gap concentrates, the consultants may decompose the volume gap of supermarkets in country A. We do not show this decomposition in Figure 12.8 on the

next page.

THE ‘80/20 RULE’ (THE PARETO PRINCIPLE) The purpose of decomposition is to identify an uneven distribution of the result gap. This unevenness points to the Pareto Principle. This is the so-called ‘80/20 rule’. In many cases, 20 per cent of the explanatory factors will explain 80 per cent of the result. For instance, 20 per cent of customers account for 80 per cent of the revenues. The consultants want to identify the unevenness in a minimum number of decompositions. When creating decomposition structures, as in Figure 12.8, they will begin with the segmentation criterion that is most differentiating. In the example, the consultants may choose from two segmentation criteria: country and distribution channel. They chose the country as the first criterion because it is a stronger differentiator than the channel. The unevenness of the distribution over countries is larger than the unevenness over channels. Therefore, the consultants begin with the decomposition by country and subsequently decompose by channel.

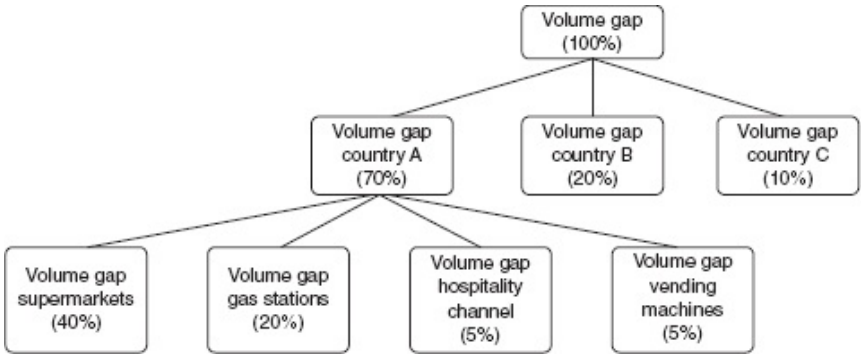

FIGURE 12.8 *Determine the distribution of the result gap across segments*

AVOID THE TRAP OF THE AVERAGE Uncovering the distribution of the overall result gap over the different segments of the client’s scope (such as products, channels, and countries) enables the consultants to avoid the trap of the average. What do we mean by that trap? The average does not indicate the distribution. Relying on the average alone is based on the hidden assumption that there is no distribution. For instance, a client company with two product divisions A and B has an average result gap of 5 per cent (the gap expressed as a percentage of the desired result). You may be tempted to conclude that both product divisions A and B have a gap of 5 per cent. However, consultants decompose the overall result gap into the gaps of the individual segments. Such decomposition may reveal that division A has a positive result gap of 5 per cent (its achieved result exceeds its desired result), while division B has a negative gap of 10 per cent (its desired result exceeds its achieved result).

UNCOVER THE HIDDEN GAP In the example of CandyCorp, you may be tempted to focus solely on country A because of its large volume gap (see Figure 12.8). However, there may be large gaps at lower levels in the structure that are hidden at the higher level. For instance, country B has a much lower gap than A. However, the lower overall gap for B may be the result of a very large negative gap (achieved volume below desired volume) in country B's supermarkets that is partially compensated for by positive gaps (achieved volume above desired volume) in country B's petrol stations and hospitality channel. The gap in country B's supermarkets may even exceed country A's supermarket gap. Therefore, consultants will also decompose the other segments to uncover possible hidden gaps at lower levels.

CONSIDER INTERDEPENDENCIES BETWEEN SEGMENTS Decomposition of the result gap into segments increases the focus of the diagnosis. This is a benefit. Consultants reduce the complexity of a client's result gap by breaking it down into increasingly low-level segment gaps. Subsequently, they focus on those low-level gaps that contribute most to the overall gap. Exclusive focusing on the largest low-level gaps implies a hidden assumption that the segments are independent of each other. For example, a client company may have a large negative result gap in country X and a positive gap in country Y. However, these results may be interlinked via the client's transfer pricing system. The client's subsidiary in country X produces for the subsidiary in country Y. Because country X has a higher corporate tax rate than Y, the client applies a relatively low transfer price. The low transfer price reduces the result of the subsidiary in country X while increasing the result of the subsidiary in country Y. The result gaps of country X and Y are interdependent because of the transfer pricing. Consultants decompose the result gap into segments, but they also consider the interdependencies between these segments.

MINI CASE STUDY

AcStrat Consulting: segment the result gap

Where is the result gap?

AcStrat's internal taskforce segments the volume gap (see Figure 12.9). The consultants develop a logical structure of segments and segment the volume gap by geography. They compare the volume gap by segment. All segments show a gap, but the largest gaps are in Western Europe and North America.

Subsequently, the consultants segment the volume gap by office, partner, and industry sector. However, these segmentations only reveal minor differences between segments.

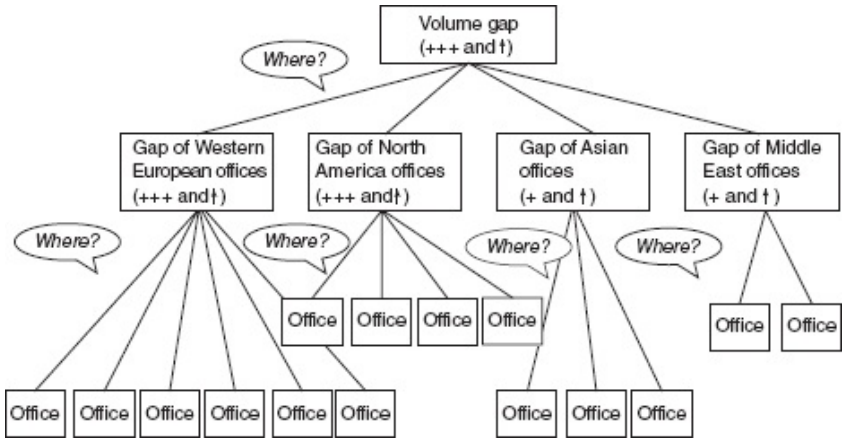

FIGURE 12.9 *Segment the volume gap*
Notes: The plus signs (+) indicate the size of the gap; ↑ = increasing

Structure possible causes of the result gap

The example about the interdependencies between segments takes a step towards explaining the result gap. The next step in the structured problem diagnosis is explaining the result gap, or more precisely, explaining the low-level gap that contributes most to the overall gap. The consultants have to answer the question: why does the negative result gap exist? Consultants need to know since when the result gap has existed, to identify and investigate the negative disturbing event.

STRUCTURING THE POSSIBLE CAUSES OF THE RESULT GAP After having collected these possible explanations of the result gap, the consultants create a logical structure for the possibilities. Figure 12.10 provides an example of a logical structure of possible explanations for CandyCorp's volume gap in the supermarket channel. These explanations are about the causes of the firm's result gap. The volume gap may have three possible causes. First, only a small number of supermarkets have CandyCorp's product in their assortment. Second, the supermarkets that sell the client's product have a relatively low sales volume in the product category to which the CandyCorp's product belongs. The third possible explanation for low volume is that the client product has a small share of the product category sales volume of the supermarkets where the product is sold.

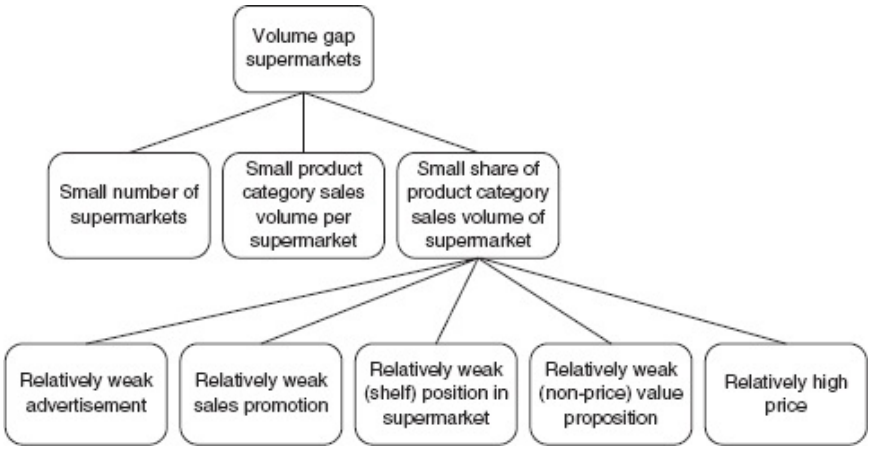

FIGURE 12.10 *A logical structure of possible causes of a volume gap*

Note: This figure only shows the possible explanations for 'small share of product category sales'. It does not show the possible explanations for 'small number of supermarkets' and 'small product category sales volumes'.

Logical structuring

MECE Consultants want to develop structures of possible explanations that are logical. The question arises: what constitutes a logical structure? The top tier consultants develop structures whose members are MECE. MECE is an acronym coined by McKinsey alumna Barbara Minto when she worked for that firm. MECE is an abbreviation of Mutually Exclusive, Collectively Exhaustive (Minto, 1987). The members of the structure should be mutually exclusive, that is there must be no overlap of members. The structure should also be collectively exhaustive, namely having no missing members.

Although Barbara Minto coined the acronym MECE, the underlying knowledge is much older. It can be traced back to the philosopher-theologian John Dun Scotus (1266–1308). Scotus published three requirements of a clear division. First, all members resulting from the division are part of the subject matter that is divided. Second, the division has a mutually exclusive character. Third, the division exhausts the subject matter to be divided. Figure 12.11 on the next page visualizes these three requirements of a logical structure.

PART OF THE SUBJECT MATTER Let us illustrate the three requirements of a clear structure. First, all members are part of the subject matter. Assume the subject matter is the client's profit. The consultants divide profit into revenues, costs, and reputation. Revenues and costs are members of the profit equation (profit equals revenues minus costs). However, reputation is not a member of profit. Reputation can be a determinant of profit. Therefore, it may be a member of a division of profit determinants. But reputation is not a member of the division of profit.

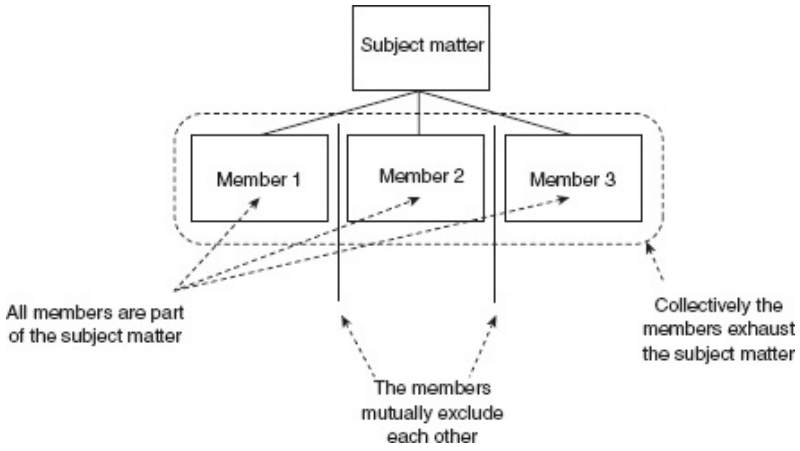

FIGURE 12.11 *Three requirements of a logical structure*
Source: Scotus (1982)

MUTUALLY EXCLUSIVE Second, the division of the subject matter has a mutually exclusive character. In terms of Minto: the members are mutually exclusive. Assume the consultants have to structure the possible explanations for the client's high product costs. They come up with three possible explanations which are low production scale, high product quality, and high product differentiation. Scale is mutually exclusive with product quality and with product differentiation. However, product quality and product differentiation are not mutually exclusive. Quality can be a differentiator.

COLLECTIVELY EXHAUSTIVE Third, the division exhausts the subject matter to be divided. In Minto's terminology: the members are collectively exhaustive. Assume the consultants need to explain the client's decreasing sales. The client operates in a couple of customer segments within a particular product market. The consultants structure the possible explanations for the client's sales decline. They distinguish between declining market demand and the client's decreasing share of the segments it operates in. These explanations are mutually exclusive, though not collectively exhaustive. A third explanation may be the decline of the client's segment shares of the total market. The market as a whole may be stable. The client's shares of its segments may be stable. However, if the client's segments decrease (their share of the total market decreases), then their sales will decrease. Figure 12.12 provides a visualization of a flawed structure. This structure violates each of the three requirements of a clear structure.

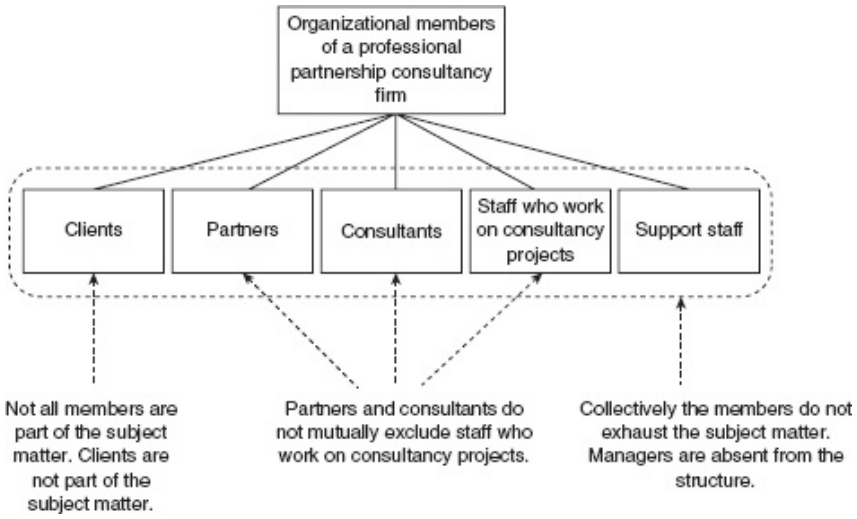

FIGURE 12.12 *An example of a structure that does not meet the three requirements*

CASE STUDY

AcStrat Consulting – structure possible gap causes

Why does the problem exist?

The consultants need to explain why the volume gap exists. First, they investigate the causes of the gap. Second, they logically structure the possible causes (see Figure 12.13). Third, they verify these causes. Their analyses confirm three causes.

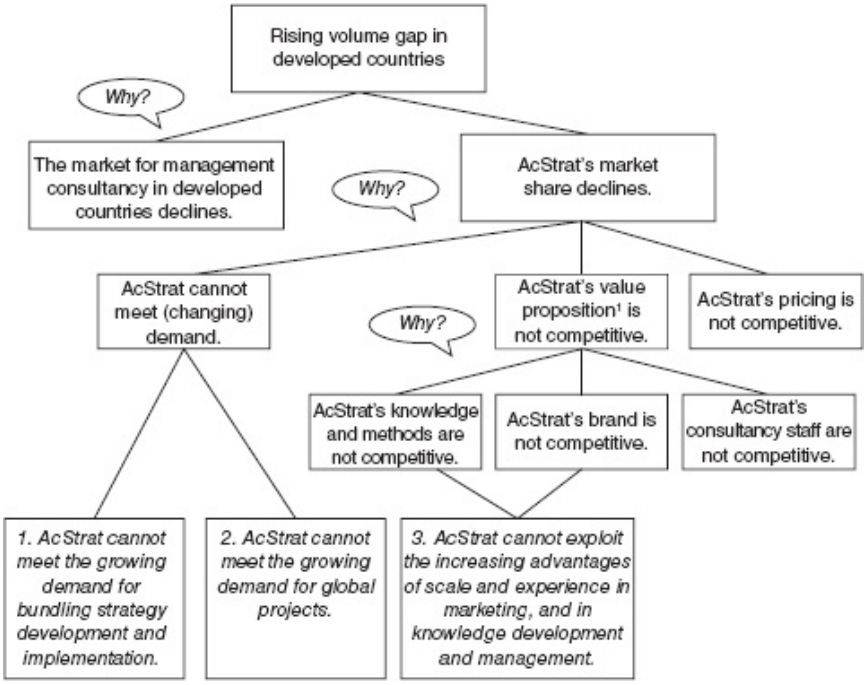

FIGURE 12.13 *Structure the possible gap causes*
Note: Outcome of analyses confirms three causes (italicized text). (1): Value proposition for strategy development consultancy.

Select a hypothesis about a possible cause

IDENTIFYING THE BEST POSSIBLE EXPLANATION To identify the cause of the result gap, the consultants use a technique called 'abductive reasoning'. Abductive reasoning is inferencing to the best possible explanation of a given result. The American philosopher Charles Sanders Peirce (1839–1914) introduced the term as 'guessing'. Given an observed result, the consultants identify what they think is the best possible explanation of the result gap. For instance, the client company has too high a cost per unit of product. The consultants consider alternative explanations and conclude that a scale disadvantage in production may best explain the client's high cost. If the scale disadvantage were true, then a high product cost is a matter of course. This possible, because it is untested, explanation serves as a hypothesis. The consultants subsequently test their hypothesis. Is it true that the client has a scale disadvantage? If the test of the hypothesis leads to an acceptance of the hypothesis, then the consultants have verified their explanation of the gap.

HYPOTHESIS REJECTION They have identified the cause of the result gap.

This cause explains the gap. However, if the test of the hypothesis leads to a rejection of the hypothesis, then the consultants need to identify an alternative possible explanation for the result gap. The alternative explanation becomes the next hypothesis. The consultants continue formulating and testing hypotheses about the causes of the result gap, until they have a verified cause.

PARTIAL EXPLANATION In some projects, a single verified cause may not explain the whole result gap. For instance, the scale disadvantage only explains half of the cost gap. The consultants have to formulate and test hypotheses about additional causes, until the verified causes together explain the whole cost gap. Because additional hypothesis formulation and testing are time consuming and expensive, consultants may not continue this work until they can explain 100 per cent of the result gap. If 20 per cent of the consultants' time is sufficient to explain 80 per cent of the result gap, then the consultants will not spend an extra 80 per cent of their time to explain the remaining 20 per cent of the gap. However, the client may demand a 100 per cent explanation and accept the time and costs.

THREE TYPES OF INFERENCING Deductive and inductive inferencing are relatively well known compared to abductive inferencing (see Figure 12.14).

Deductive inferencing. Deductive inferencing moves from a general rule to a specific result. The general rule forms the precondition (high market share leads to a high profit). This is the first premise. Based on the general rule a specific case is identified (client has a high market share). This is the second premise. If both premises are true than the conclusion must be true (client has a high profit).

Inductive inferencing. In contrast, inductive referencing moves from specific cases and specific results to a probable general rule. It is a form of probabilistic reasoning. If the premises about the specific cases and specific results are true then the conclusion is probably true. For instance, the consultants identify ten companies with a high market share. In all ten cases, the companies also have a high profit. Therefore, it is probable that a high market share leads to a high profit.

Abductive inferencing. The third type of inferencing, abduction, aims to explain a specific result. Abductive reasoning, as presented by Peirce in his 1903 Harvard lectures on pragmatism, is about seeking a hypothesis to account for this specific result. The consultants observe that the client has a high profit. One hypothesis to account for a high profit is: a high market share leads to a high profit. Therefore, there is reason to suspect that the client has a high market share. The consultant should verify whether the client has a high market share.

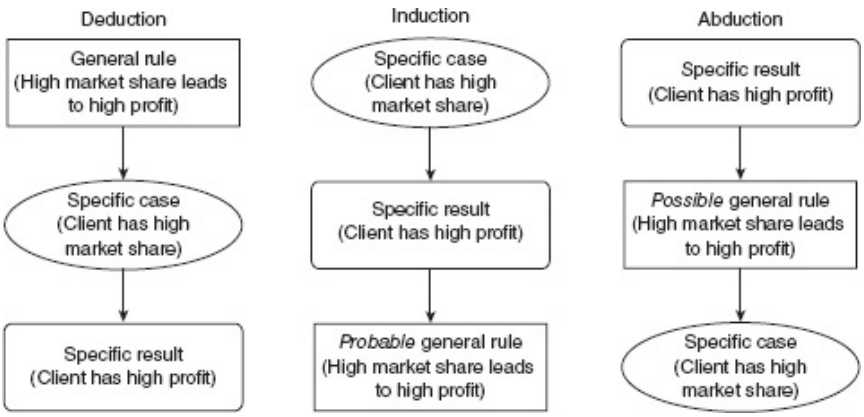

FIGURE 12.14 *Three types of inferencing*

GENERATE IDEAS ABOUT THE POSSIBLE CAUSES OF THE RESULT GAP The consultants use abductive reasoning to explain the result gap. They seek a hypothesis about an explanation. The hypothesis is what the consultants think is the best possible explanation of the result gap. The consultants select the hypothesis from the range of possible explanations of the result gap. They create an overview of the possible explanations. They should make sure that they do not overlook explanations as they do not want to hear from the steering committee: 'Why have not you considered [the overlooked explanation]?' Often, the consultants will have done similar consultancy projects. They will have experience with this type of problem or they will be aware of analogies. That is a reason why the client has hired them. These consultants may use this experience to create overviews of possible explanations. If they lack such experience, they may organize brain storming sessions with knowledgeable clients and other stakeholders to collect ideas about possible explanations.

Test a hypothesis about a possible cause

TEST THE POSSIBLE CAUSE Based on their own insights and/or those of knowledgeable clients and other stakeholders, the consultants conclude that a small share of the category sales of the supermarkets that sell the client's product is the most probable cause of the low volume of CandyCorp's product in the supermarket channel (see Figure 12.10). This is an untested hypothesis. To verify their hypothesis, the consultants investigate the client's share of the category sales. They find that CandyCorp has a low share which explains the volume gap. The analysis confirms the consultants' hypothesis that the small share explains the volume gap. Now they know that the small share of the client's product is the cause of the volume gap.

DIG DEEPER However, a new question arises: why does CandyCorp's product have a small share? Therefore, the consultants investigate the possible causes of this small share. Figure 12.10 distinguishes between five alternatives that the consultants have come up with (see the lowest level of the structure). Based on their own insights and/or those of knowledgeable clients and other stakeholders, the consultants conclude that a relatively weak (non-price) value proposition is the most probable cause of the client product's small share of the category sales. This is again an untested hypothesis which the consultants need to investigate. Assume that the investigations confirm the hypothesis. Now the consultants know that the weak value proposition explains the small share.

TEST THE ROOT CAUSE However, the diagnosis is not yet complete. The consultants need to find out why the value proposition is weak. We will not discuss these next steps but the consultants will continue their diagnosis until they have developed a fundamental understanding of the problem. They will search for the root cause of the result gap. This rich insight enables the consultants to develop very effective solutions that are superior to those developed by others who lack an in-depth understanding of the problem.

COLLECT DATA To verify the hypotheses about possible causes, the consultants need to collect data (see Chapter 13 for an overview of data collection techniques). They should not collect data because of the data. Data collection is a means not an end. The purpose is to verify a possible cause. Therefore they should not collect more data than are necessary for this verification. This data collection may be more difficult than the one required for the result decomposition. The consultants may need data about all kinds of subjects, both within and outside the client organization. Consultants will not receive a pack containing all the data needed to solve the problem. They will have to find the data themselves. Some data will be quantitative while other data will be qualitative.

INTERACT WITH PEOPLE Some data may be codified while other data may be tacit. Consultants have to visit the client's premises and if necessary other places, such as customers, suppliers, distributors, and competitors. They need to talk to people, both inside and outside the client organization. In particular people on the front line are valuable sources of information. They know the operations. They know the customers and suppliers. The consultants may also have to observe people: how do they work and how do they behave? Studying people is also important in order to understand their attitude towards the consultants, the project, and towards possible solutions. Better understanding of the stakeholders is critical for understanding the feasibility of implementing particular solutions. Will this organization be able to

implement those solutions? Furthermore, interaction with people inside and outside the client organization is important for creating understanding and support. The stakeholders may have a negative attitude about the consultants and the project. Through communication, the consultants may try to improve the stakeholders' attitude.

Accept, reject and iterate

ACCEPT THE CAUSE The consultants use the analysis to test the possible cause of the result gap. The analysis of a possible cause may lead to one of two outcomes. Either the analysis confirms the cause and leads to an acceptance of this cause, or the analysis leads to a rejection of the possible cause. The confirmed cause forms (a part of) the explanation of the result gap.

REJECT THE POSSIBLE CAUSE If the consultants have to reject the possible cause on the basis of the analysis, then they have to identify an alternative possible cause. Subsequently, they will have to test this alternative cause. The consultants continue to test possible causes until they have a sufficient explanation of the result gap. By sufficient we mean that the consultants can explain most of the result gap. The explanation does not necessarily have to cover 100 per cent of the result gap. The steering committee decides what is 'sufficient'.

MEASURE THE EXTENT OF THE EXPLANATION When the consultants have confirmed a cause for the result gap, then they will measure the impact of this specific cause on the result gap and will do this with the help of the economic model of the client's business that they have built. To what extent does this specific cause explain the result gap? Does this specific cause explain the whole result gap or does it explain (only) a part of it? If the specific cause explains the whole gap, then the consultants have a complete explanation of the result gap. They are ready to formulate the key question.

ACCEPT AND ITERATE In the example of CandyCorp, the consultants may analyse the relatively high price as a possible cause of the client's small share of product category sales. The analysis may identify a relationship between price and sales. The consultants may analyse that the client's high price cannot fully explain the low sales. Assume the desired sales are one hundred and the achieved sales are seventy. The result gap is then thirty. Based on the price–sales relationship, the high price is expected to generate sales of eighty. The high price explains two thirds of the result gap (twenty out of the thirty). The price differential cannot explain the remaining one third of the result gap. There must be at least one additional cause for

the low sales.

ITERATE TO EXTEND THE EXPLANATION If the confirmed cause only explains part of the gap, then the consultants need to identify one (or more) other possible causes of the result gap until they have extended the explanation sufficiently. The consultants need to analyse these causes. They will continue identifying and analysing possible causes until they can explain a sufficient part of the gap. As stated before, a 100 per cent explanation of the gap may neither be feasible nor desirable.

DECIDE ON THE TRADE-OFF The Pareto Principle or the '80/20 rule' may apply here. For example, the consultants have confirmed two causes that together explain 80 per cent of the client's result gap. The data collection and the analyses required to explain the remaining 20 per cent are expected to take at least four times as much time and effort as the analysis of the two afore-mentioned causes. The steering committee has to decide on the trade-off between the marginal benefits of explaining the 20 per cent and the marginal costs of the additional data collection and analyses. The time opportunity costs of consultants are usually high because consultancy projects in general have a fixed duration. Time spent on additional analyses of possible causes of the result gap cannot be spent on developing solutions to close that gap.

Both in the case of a rejected cause and in the case of a confirmed cause that only explains a part of the result gap, the consultants have to iterate. They have to repeat the process of identifying and testing a possible cause.

Formulate the key question

Based on the three steps of problem diagnosis, the top tier consultants formulate the problem as one single question. This question ensures the focus for the consultants and guides them in the solution development. The question has the following form: *how should the client respond to the root cause of the result gap to close this?* Closing the profit gap means achieving the desired result. Therefore, we may formulate the key question as: *how should the client respond to the root cause of the result gap to achieve the desired result?* In a real project, the question incorporates the specific desired result: x millions of client's currency before a specific date. We illustrate the process of question formulation with our example.

Summary: from gap to question

IDENTIFY AND DECOMPOSE THE RESULT GAP The first step of the problem diagnosis is about identifying the result gap. CandyCorp in our example had

a profit gap of $250 million (see Figure 12.6). By decomposing the profit gap, the consultants discovered that the volume gap explained most of the profit gap. Therefore, the consultants turned their attention to the volume gap.

SEGMENT THE RESULT GAP In the second step, the consultants investigated where CandyCorp's volume gap was largest. The consultants segmented the volume gap and found out that the supermarket channel in country A accounted for the largest part of the volume gap (see Figure 12.8). Therefore, the consultants further narrowed their focus to the volume gap of the supermarket channel in country A.

STRUCTURE THE POSSIBLE CAUSES OF THE GAP AND TESTING THESE CAUSES In the third step, the consultants investigated why the volume gap in country A's supermarket channel existed. The consultants structured the possible explanations for this volume gap (see Figure 12.10). They used the structure to seek a hypothesis to explain the gap. Assume that the small share in the supermarkets' category sales have been caused by a relatively high price and a relatively weak shelf position in the supermarkets. Both causes are due to the introduction by the supermarkets of retail brands in the CandyCorp's product category. Assume that this retail brand introduction took place in all three countries where CandyCorp operates and that it caused volume gaps in the client's supermarket sales in all countries. The introduction of retail brands is therefore the root cause of the volume gap in the supermarket channel and thereby the root cause of the largest segment of the client's profit gap.

FORMULATE THE KEY QUESTION Based on this root cause, the consultants formulate CandyCorp's problem as a question. How should CandyCorp respond to the introduction of retail brands by supermarkets in order to close its profit gap? Closing the profit gap means achieving the desired result. In a real project, the question incorporates the specific result. Assume CandyCorp's desired result is a profit of $500 million within two years. Now the consultants can formulate the key question as follows: *how should CandyCorp respond to the introduction of retail brands by supermarkets in order to achieve a profit of $500 million within two years?*

Define the problem statement

INVESTIGATE THE CONTEXT FOR SOLUTION DEVELOPMENT Top tier consultants always create a problem statement. This statement outlines the problem diagnosis and provides a context for solution development (see Figure 12.15 on the next page). The problem diagnosis consists of a

description of the negative disturbing event and the result gap which arose because of the negative disturbing event (the root cause of the gap). The negative disturbing event and the result gap are the two components of the key question that in its turn summarizes the client's problem.

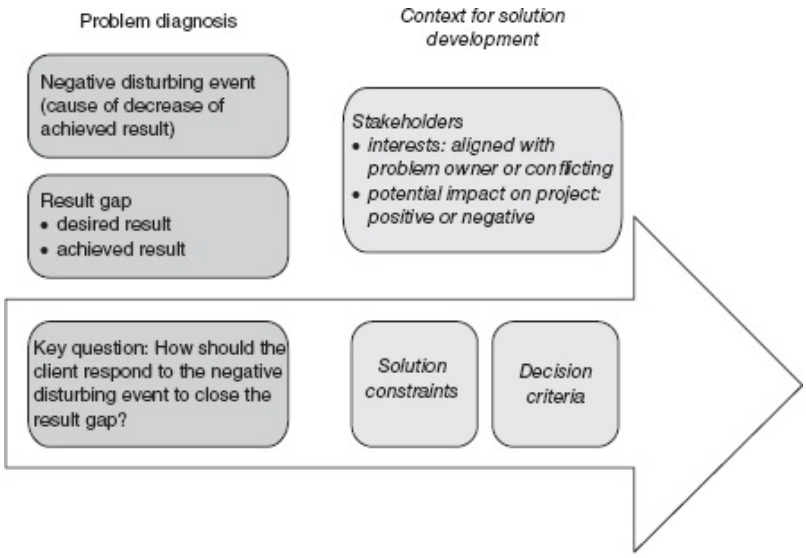

FIGURE 12.15 *The problem statement*

INVESTIGATE THE STAKEHOLDERS Next, the consultants investigate the context for the solution development. By the context we mean the factors that consultants should take into account when developing a solution to the problem or an answer to the key question. First of all, the consultants need to analyse the stakeholders (see also Chapter 10). The consultants should also identify the main stakeholders. The main stakeholders are those that are probably affected by the problem solving project and by the solution, and/or may influence the project and the solution. Figure 12.16 on the next page visualizes how consultants may map the main stakeholders. The figure plots the stakeholders along two dimensions. Horizontally, we position stakeholders on the basis of their impact on the project and the solution. The vertical axis indicates the interests of the stakeholders, which may reflect the nature of the impact of the project and solution on these stakeholders. The resulting quadrants represent four categories of stakeholders.

IDENTIFY THE CONSTRAINTS Before consultants start developing solutions for the client's problem, they should identify the constraints if any that limit the solution space. Not all solutions that the consultants may develop will be feasible or acceptable for the client and the stakeholders. The constraints reduce the theoretical solution space (see Figure 12.17). They are also absolute. This means that the client

will reject any solution that violates a constraint. In Figure 12.17, the two constraints reduce the theoretical solution space to the smaller blue box. By knowing upfront the remaining solution space, the consultants will not waste time developing solutions outside this space.

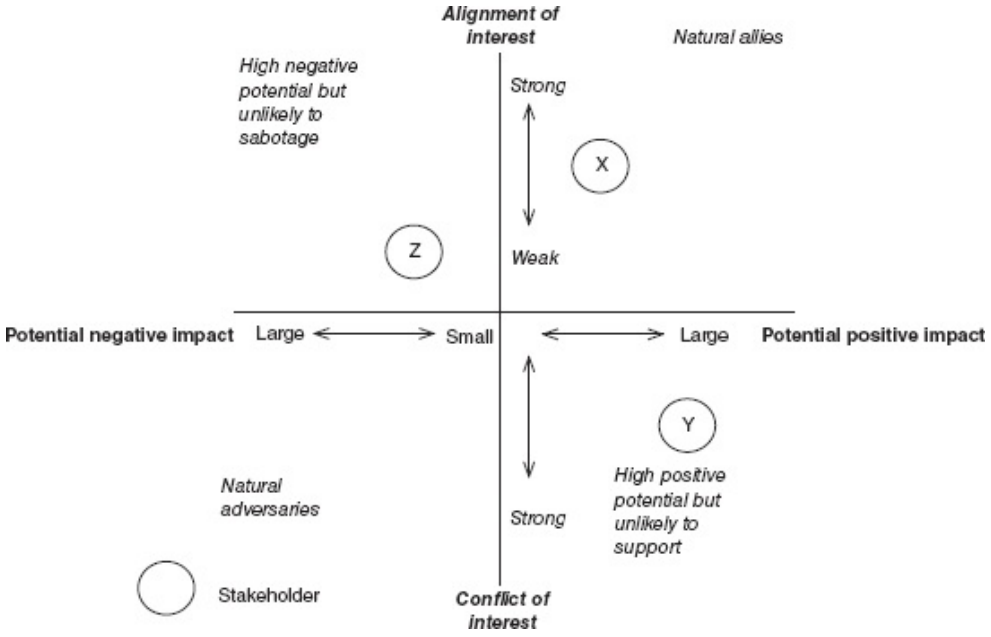

FIGURE 12.16 *Map the stakeholders*

IDENTIFY THE CRITERIA The consultants should also know beforehand what decision criteria the client will apply. How will the client decide upon the proposed solution(s) by the consultants? The criteria come into play after the constraints. First, the constraints reduce the solution space. The client will not consider solutions outside the reduced solution space. Second, the criteria rank the remaining solutions within the reduced solution space. The client uses the criteria to evaluate the solutions within the solution space (see Figure 12.17 on the next page). By knowing the criteria, the consultants will also know how to evaluate possible solutions. When possible, the consultants will only select solutions that meet the client's criteria.

INVESTIGATE THE EXPECTATIONS In addition to the criteria and constraints, the consultants should know what other factors influence the client's satisfaction with the recommended solution and the consultancy project. The consultants should know upfront: when will the client be satisfied with our recommendation and with the project? What does the client expect from the recommendation and from us? Knowing these expectations may guide the consultants. However, if the consultants find out that the client holds unrealistic expectations, then they may try to convince the client to adjust their expectations.

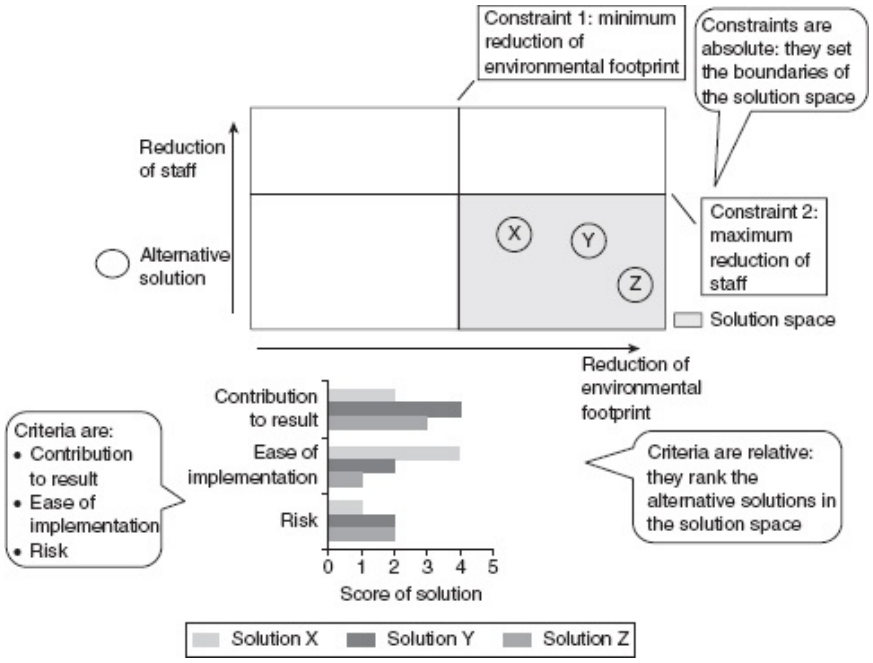

FIGURE 12.17 *Constraints and criteria*

CASE STUDY

AcStrat Consulting – formulate the key question and define the problem statement

The consultants have – through analysis – verified that changing demand as well as increasing scale and experience advantages explain AcStrat's profit gap. The consultants have interviewed the managing partners and other main stakeholders to get insights into the decision criteria and constraints. They have also conducted a stakeholder analysis. Based on these activities, the consultants are able to complete the problem statement. Figure 12.18 presents this statement.

TABLE 12.1 *Problem statement*

Problem statement	AcStrat
Achieved result	A loss of X USD
Disturbing events	Changing demand and increasing scale and experience advantages
Desired result	Within one year reach a breakeven result, and within three years realize a profit per partner of Y USD
Key question	How should AcStrat Consulting respond to the changing demand and increasing scale and experience advantages to realize a profit per partner of Y USD within three years?
Stakeholders	AcStrats partners, consultants, support staff, clients, and alumni
Constraints to the solution	• No financial reserves for absorbing further losses (no time) • No room for investment
Decision criteria	• Profit per partner • Maintaining the partnership base intact • Speed of implementation • Ease of implementation

STRUCTURED OPPORTUNITY DIAGNOSIS

A positive disturbing event

A positive disturbing event for the client allows that client to increase its desired result. The idea is that the positive disturbing event allows the client to achieve a higher desired result. Therefore, the client can raise its objective, that is, its desired result. The positive disturbing event creates an opportunity for the client.

PERCEPTION Client and/or consultants perceive an opportunity for the client. We may distinguish between two alternative points of departure. One point of departure is when the client believes there is an opportunity and hires a consultant to develop advice which allows the client to seize that opportunity. The alternative point of departure is when consultants believe there is an opportunity for a client or prospect. The consultants approach the client or prospect with a proposal for seizing the opportunity. Consultants explore client opportunities to sell projects.

MEASUREMENT OF THE RESULT GAP In the case of a problem, the consultants can directly measure the result gap. In the case of a perceived opportunity, the consultants cannot measure the result gap immediately. They may measure the client's achieved result but they cannot yet measure the increase in the desired result. First, the consultants need to develop a better understanding of the opportunity, in particular the monetary value of that opportunity, before they may assess the new

(increased) desired result for their client. The sequence of steps in an opportunity diagnosis differs from the sequence in a problem diagnosis (see Figure 12.18).

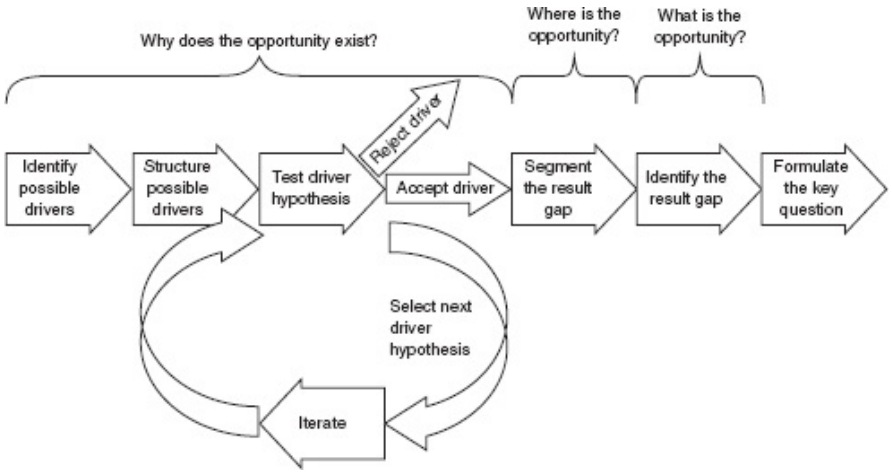

FIGURE 12.18 *The structured approach for diagnosing an opportunity*

Identify the possible opportunity drivers

POSSIBILITIES The opportunity drivers are the answer to the question: why does the opportunity exist? To assess a client's opportunity, the consultants have to know the drivers of that opportunity. The first step for the consultants is to identify the possible drivers of the client's opportunity. Please note the use of the adjective 'possible'. At this stage, the consultants have not yet verified the drivers. Therefore, they cannot be sure the identified factors are the real drivers of the opportunity.

CONSULTANTS' EXPERIENCE The consultants may have had experience with the particular opportunity. They may have conducted previous consultancy projects on comparable opportunities. These projects may have taken place in the same sector as the current project or in other sectors. The consultants may exploit their knowledge about similar opportunities, or even the same opportunity, to identify the drivers of the opportunity. If the consultants' knowledge is insufficient, then they may turn to the client or to external experts.

OTHER EXPERTISE Inside the client organization, the consultants may find individuals, managers or professionals, with relevant knowledge about the opportunity. Moreover, the consultants may approach experts outside the client organization who have knowledge about the opportunity.

Consultants may use interviews with client organizational members and external experts to collect information about possible drivers. Consultants may also organize a

workshop with these people to brainstorm about possible opportunity drivers. The idea of the workshop is to stimulate divergent thinking. The workshop participants should be free to introduce their suggestions for what may drive the opportunity.

Structure the possible opportunity drivers

After the consultants have generated the possible drivers, they will develop a logical structure for the possible drivers. This logical structuring allows the consultants to create oversight, to eliminate the overlap between drivers, and to identify omissions, if applicable. The resulting structure is a hypothetical model of the opportunity. Figure 12.19 on the next page provides an example of an opportunity based on a new product to increase profit. The opportunity of the new product depends on three drivers:

1. The willingness of customers to pay for the product.
2. Relatively low switching costs for customers.
3. The ability of customers to pay for the product.

The willingness to pay for the product depends on the relative value proposition of the product, which is the product's value relative to existing products and substitutes, and on the relative price, that is the price of the product compared to those for existing products and substitutes.

Test the hypotheses about possible drivers

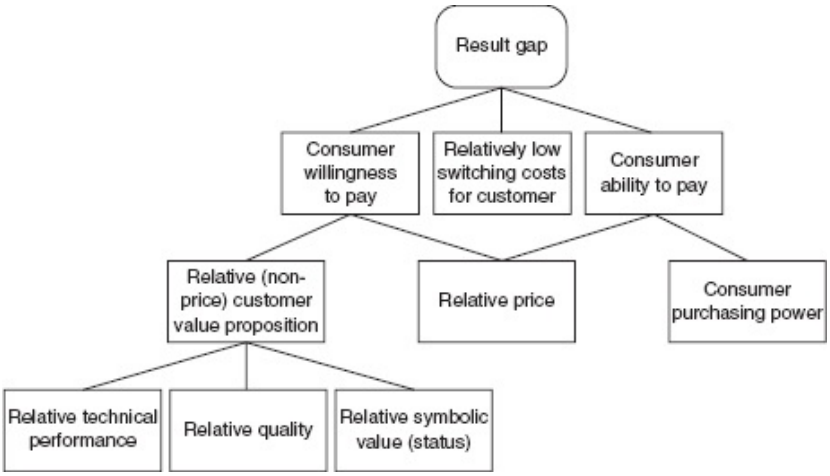

FIGURE 12.19 *A hypothetical model of the opportunity*

TEST ALL POSSIBLE DRIVERS The possible drivers are just that: possibilities. The consultants have to verify all drivers. They are the consultants'

hypotheses and they need to be tested. For the test, the consultants need to design analyses. For instance, they need to analyse the relative technical performance of the new product. The consultants need to benchmark the technical performance of the new product with the performance of alternative products. The analysis may verify a hypothesis (driver). The consultants accept the verified driver. However, the analysis may also lead to a rejection of the hypothesis (driver).

ANALYSE DRIVER STRENGTH The consultants need to analyse the strength of the verified, accepted drivers. The strength of a driver influences the size of the opportunity. Take the example of Figure 12.19. If the relative technical performance of the new product is high and if the customers attach a high weight to technical performance, then the opportunity will be large compared to the situation where the relative performance is lower and/or the weight of performance is lower.

Accept, reject, and iterate

SIZE OF THE OPPORTUNITY After all the analyses have been done, the consultants are able to separate the accepted drivers from the rejected drivers. The consultants continue the opportunity diagnosis with the accepted drivers. They have to estimate the size of the opportunity. The size of this opportunity depends on the number of drivers and the strength of each individual driver. We can distinguish between two extreme situations.

CLEAR ACCEPTANCE In one extreme, the consultants' analyses will lead to the acceptance of all possible drivers and the analyses will indicate that all the drivers are strong. This extreme situation presents a big opportunity. Therefore, the consultants should continue with the opportunity diagnosis.

CLEAR REJECTION In the other extreme, the analyses lead to the rejection of all possible drivers, or all the verified drivers appear to be (very) weak. Rejection of all drivers means there is no opportunity. There is no reason to continue the opportunity diagnosis. Weak drivers imply that the opportunity is small. The steering committee will typically decide to stop the opportunity diagnosis.

AMBIGUOUS SITUATIONS The in-between situations are ambiguous. There are few drivers and they have moderate strength. The steering committee has to judge whether it is worthwhile to continue the opportunity diagnosis in these in-between situations.

Segment the result gap

For a more fine-grained insight into the opportunity, the consultants will divide the opportunity into segments. For instance, the consultants may segment the opportunity according to customer type, geography, or distribution channel. The choice of segmentation criterion depends on the client context and the nature of the opportunity. Consultants want to know how the opportunity is distributed over the various segments. We may conceptualize a spectrum of options. One extreme of the spectrum is an opportunity that is evenly spread over all segments. The opposite extreme is an opportunity that is fully concentrated in one single segment. The consultants have to assess the strength of the verified opportunity drivers in the various segments to get a better idea of the distribution of the opportunity. The consultants have already assessed the strength of drivers in the previous step. But this was an assessment in a general way. The consultants did not distinguish between segments. This insight into the opportunity distribution will allow consultants to concentrate on the most important segments and develop a solution that in any case targets these segments. Figure 12.20 on the next page visualizes the segmentation of buyers for the new product. The consultants evaluate the strength of the three opportunity drivers for each segment.

Identify the result gap

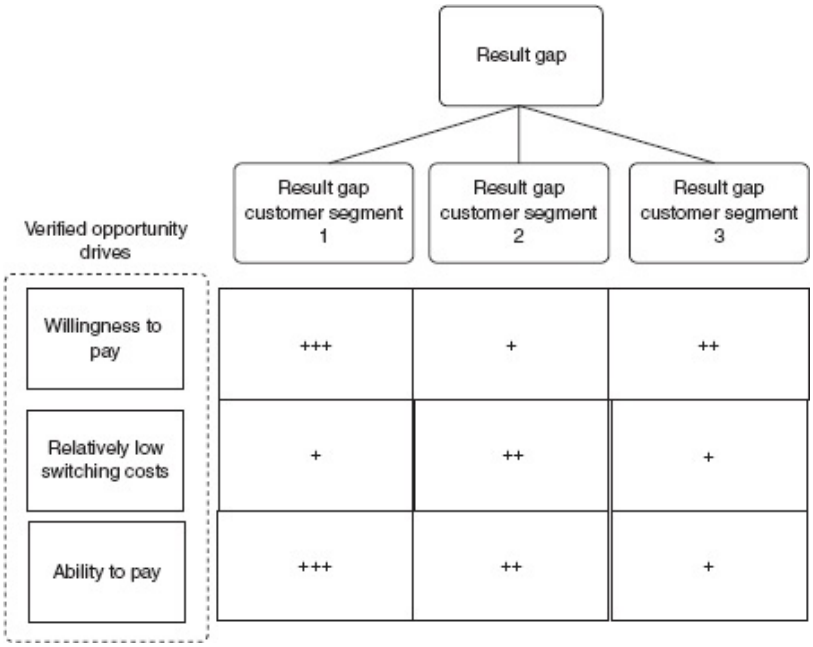

FIGURE 12.20 *Segment the result gap*

ASSESS THE SIZE OF THE OPPORTUNITY Based on the verified opportunity drivers and the segments, the consultants may assess the size of the result gap. Knowledge of the distribution across segments enables the consultants to prioritize this assessment tasks. The consultants will first work on and put most effort into estimating the size of the largest segments. Figure 12.21 on the next page shows how the opportunity drivers determine the size of the opportunity in profit terms. The consultants quantify the size of the opportunity for the segments with the use of these drivers.

DECIDE ON THE DESIRED RESULT Given the opportunity size, the client has to decide what increase of its desired result is appropriate. Assume the opportunity of the new product in terms of profit is $250 million. The client thinks that it is realistic to assume that the company can get a 40 per cent share of that profit opportunity. The increase in the client's desired result is $100 million. The consultants cannot determine the client's desired result. Setting the desired result is the responsibility of the client. Of course, the consultants may, if asked by the client, give a recommendation for the desired result.

Formulate the key question

Based on the consultants' assessment of the opportunity size, the client has determined what new desired result is appropriate. Based on the adapted desired result, the consultants formulate the following question: *how should the client respond to the opportunity to achieve the increased desired result?*

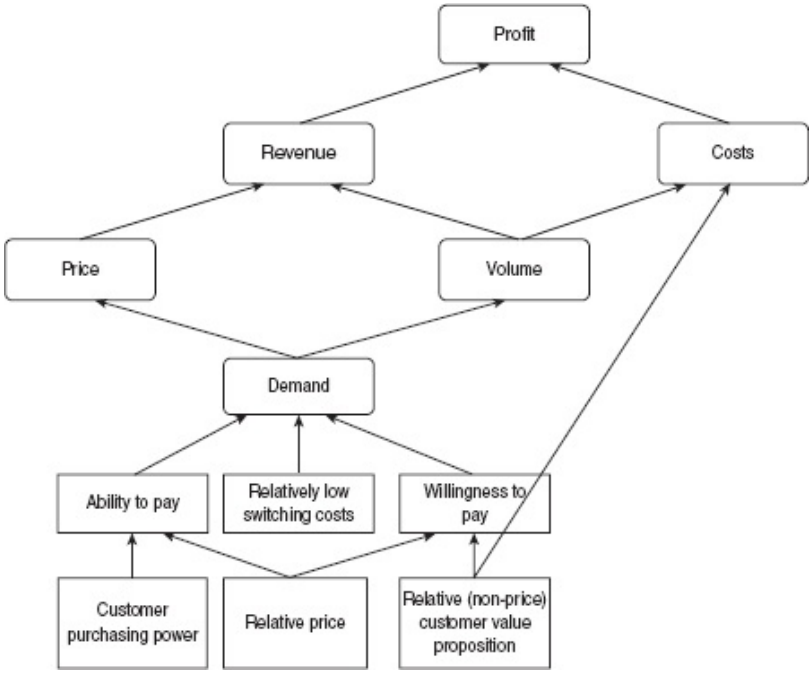

FIGURE 12.21 *Identify the opportunity (in terms of profit)*

SUMMARY

Problem diagnosis

This chapter is an interpretation of the structured problem diagnosis method of the world's top tier management consulting firms. We distinguished between five steps in problem diagnosing. The problem is defined as a gap between the achieved result and the desired result of the client. The consultants first identify what is the gap. Second, they decompose the gap by drivers. Third, they investigate where the gap is. Fourth, they explain why the gap exists. Then, they formulate the problem in the form of a key question: how should the client respond to the root cause of the result gap to achieve the desired result? Figure 12.22 on the next page summarizes the process of structured problem diagnosis.

Opportunity diagnosis

Consultants also help clients seize opportunities. The structure for diagnosis opportunities differs from that for problem diagnosis. The consultants first verify why the opportunity exists (identify the opportunity drivers). Second, they analyse where the opportunity exists (segments). Third, they estimate the size of the opportunity.

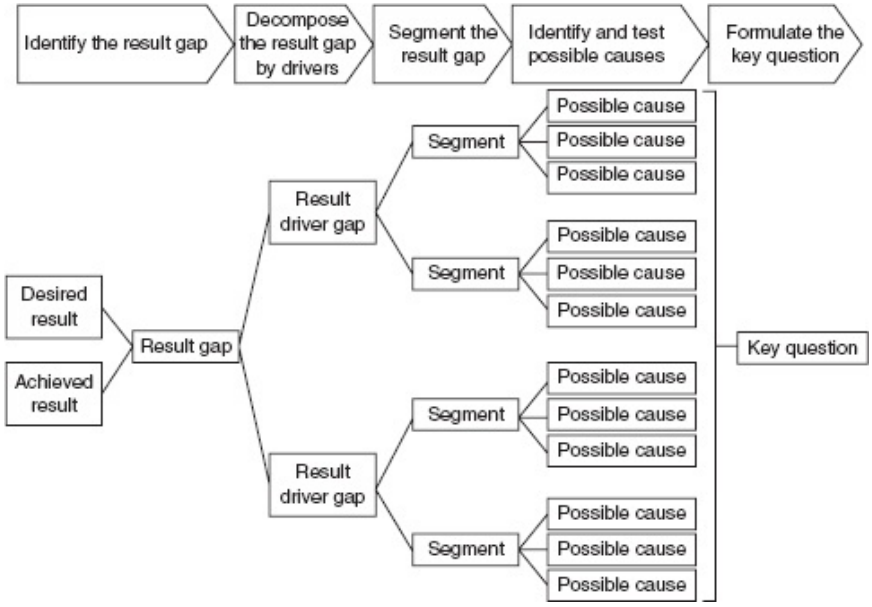

FIGURE 12.22 *The process of structured problem diagnosis*

MINI CASE STUDY

Ivy Business School

Introduction to the client

Ivy Business School is a top-ranked private non-profit graduate business school, which is located in the United States. Its mission is to develop global business leaders. Ivy is consistently ranked among the global top three in the most important business school rankings.

The school has a single campus from which it offers a portfolio of degree programmes (MBA, DBA, and PhD) and executive education programmes (about seventy open enrolment and seventy custom programmes). Last year, about 2,000 degree students (of which one third are international), and 10,000 executive students (of which two thirds are international) participated in these programmes. The degree programmes together generated $100 million in tuition and the executive programmes generated $180 million. Ivy also has a publishing division which produces business school cases (selling 10 million copies annually), business books (both textbooks and professional books, in total 2 million copies annually), and a business magazine (a circulation of 300,000 and 4 million article reprints annually). The publishing activities generate $180

million in revenues. Moreover, Ivy receives about $100 million in annual endowments from its 100,000-plus alumni network. Table 12.2 provides an overview of the organization. Ivy has about 250 faculty members, among which are several internationally renowned, ‘star’ professors. The school employs about 1,250 support staff members.

TABLE 12.2 *An overview of the organization*

	Education division	Publishing division
Offerings	Degree and executive programmes	Cases, books, and magazine subscriptions and reprints
Knowledge	Premier	Premier
Immersion	Rich interaction in class and on campus	No interactive content
Target markets	Selectivity is key: focus on tier 1 students (high position, high potential, high budget for education)	Broader scope: both tier 1 and tier 2 students
Volume	Low (12,000 students)	High (10 million cases, 4 million article reprints, 2 million books, magazine circulation of 300,000)
Pricing	High premium	Low premium
Revenues	$280 million	$180 million
Reputation	Prestigious certification of global top 3 school	Prestigious brand of global top 3 school

The disturbing event: the development of online learning technologies

Online learning

Digital technologies for online learning are becoming increasingly powerful. As a result, online learning is improving in terms of its quality, richness, and sophistication. Moreover, student access to online education is growing due to the spread of broad band technology, which allows for high-bandwidth connections. Various mid-ranked and lower-ranked business schools and online learning companies have already started offering online learning. There are also ‘online-only schools’.

Towards real time interaction

The first online learning offerings, including web-based videos, cases, and exercises, were ‘asynchronous’ in the sense that they did not provide real time

interaction with instructors and fellow students. Massive open online courses (MOOCs) are an example of such asynchronous offerings. Massive multiplayer online role playing games (MMORPGs) are an example of synchronous online applications.

More recent online learning offerings are synchronous. Synchronous online learning is about real time, live, interactive sessions, so-called virtual classrooms, with online instructors and online communities of fellow students.

Residential learning

At the same time, residential learning in business schools is becoming increasingly expensive. To illustrate this trend: the tuition fee of an MBA has risen faster than the starting salaries of graduates. These increasing costs have contributed to a diminishing enrolment in residential programmes.

Is online learning an opportunity?

Increase the share of global talent

Online learning technologies may allow Ivy Business School to increase its share of the global population of talented students. Online learning has an unlimited geographical reach. Ivy may be able to extend its (geographic) reach and thereby increase international participation rates.

Overcome capacity constraints

The school faces supply constraints. Currently, Ivy's capacity to offer educational programmes is limited by the capacity of its academic faculty. Adding high quality staff is difficult and expensive. Moreover, Ivy's supply is constrained by the capacity of its campus. This campus does not allow for expansion.

Serve alumni better

Online technologies may also allow Ivy to strengthen its ties with its alumni and support the school's ambition of lifelong learning. Ivy wants to stimulate its alumni to regularly attend new programmes at the school to prepare for the next stage of their career.

Or is it a problem?

Most demanding students

Various mid- and lower-ranked business schools have already started with online learning initiatives. As a top ranked school, Ivy serves the most demanding students: the so-called tier 1 students. At present, the online learning technologies do not meet the requirement of these most demanding students. But in the future, online learning may develop into an acceptable alternative for Ivy's students.

Immersion quality

Although Ivy acknowledges the increasing performance of online learning technologies, the school has concerns about the programme quality. Even the most sophisticated online learning offerings are still no match for the quality of the immersion of Ivy's residential learning. However, can Ivy afford to wait until the technologies are perfect? By then it may be too late because Ivy missed out on first mover advantages.

Premium pricing

Moreover, as a top ranked school with premium pricing, Ivy has much to lose because online learning will drive tuition fees down.

Selectivity versus scale

Online learning will relieve Ivy's capacity constraints in terms of faculty and campus facilities. However, part of Ivy's proposition is selectivity in student admission. The school's profile of exclusivity does not go together with massive online learning. Ivy fears a dilution of its certification if it offers massive online programmes. However, it also dreads that its star professors may set up their own online shop or be lured away by online learning players. Some stars have already participated in video lectures by online players.

Publishing activities

Ivy's publishing products are paper-based or in a non-interactive, electronic form. Real time interactive online offerings may disrupt Ivy's traditional publishing business.

The consultancy project

Ivy's board are divided about their response to online learning. Some board

members want to hold back with introducing online learning until the performance of online learning technologies has become good enough to match the demand of Ivy's tier 1 students. Other board members, including the head of publishing, say that it will then be too late for Ivy to enter the online learning arena. They urge that Ivy enters online learning right now. The dean asks himself: *what should Ivy do?*

The dean has invited the managing director and founder of Acme Consulting, who is an MBA-alumnus, to help Ivy find out how to respond to the challenge of online learning. Out of gratitude towards his alma mater, this alumnus has offered to do this consultancy project pro bono.

Identify and structure the possible opportunity drivers

Why do we expect that the opportunity exists? The consultants first identify the possible drivers of the online learning opportunity. They use desk research and interviews with knowledgeable stakeholders inside and outside the Ivy Business School. Subsequently, the consultants structure these drivers in a logical order (see Figure 12.23).

Test the possible drivers

The consultants test the possible opportunity drivers. They analyse each of the individual drivers at the lowest level of the structure (see Figure 12.24). The analyses confirm all drivers in the structure. All drivers are substantial. Therefore, the consultants accept the opportunity. The analyses confirm that the opportunity exists.

Segment the result gap

Where is the opportunity? Or more precisely: how is the opportunity distributed over the various segments? The consultants segment the opportunity for the education activities. They create a logical structure of segments. The consultants also use the drivers to assess the opportunity per segment. How is the opportunity distributed across segments?

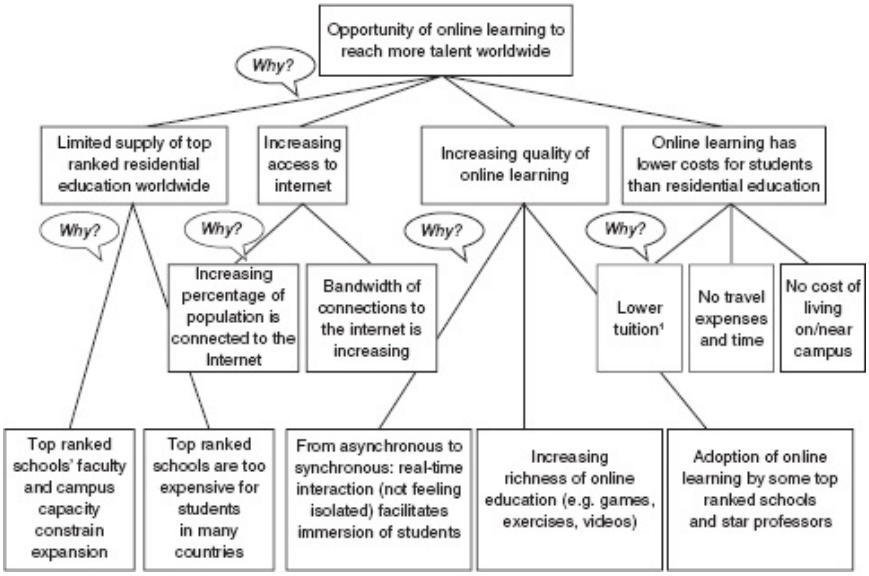

FIGURE 12.23 *Structure the possible opportunity drivers*

Notes: (1) Development costs are five times the costs of development for residential education. Delivery cost (non-interactive) is 1/10,000 of residential. Delivery costs with interaction are 1/10 of residential.

Identify the result gap

What is the opportunity? How large is it? The consultants estimate the size of the opportunity (in terms of number of students) by segment. They sum up the segments to arrive at the total opportunity. If cannibalization of residential programmes is expected, then the consultants will subtract the loss in residential programmes from the gain in online programmes. Figure 12.25 provides an illustration of only *one segment.*

Determine the desired result

The consultants estimate the size of the segment opportunity. Figure 12.26 conceptually presents the opportunity in terms of a shifting share of residential and online learning. Online learning gains a share at the expense of residential learning.

The client, the board of the Ivy Business School, determines what the new desired result is on the basis of the consultants' estimate of the opportunity size. The board decides that the school should aim to reach 5 per cent of the global higher education market within ten years.

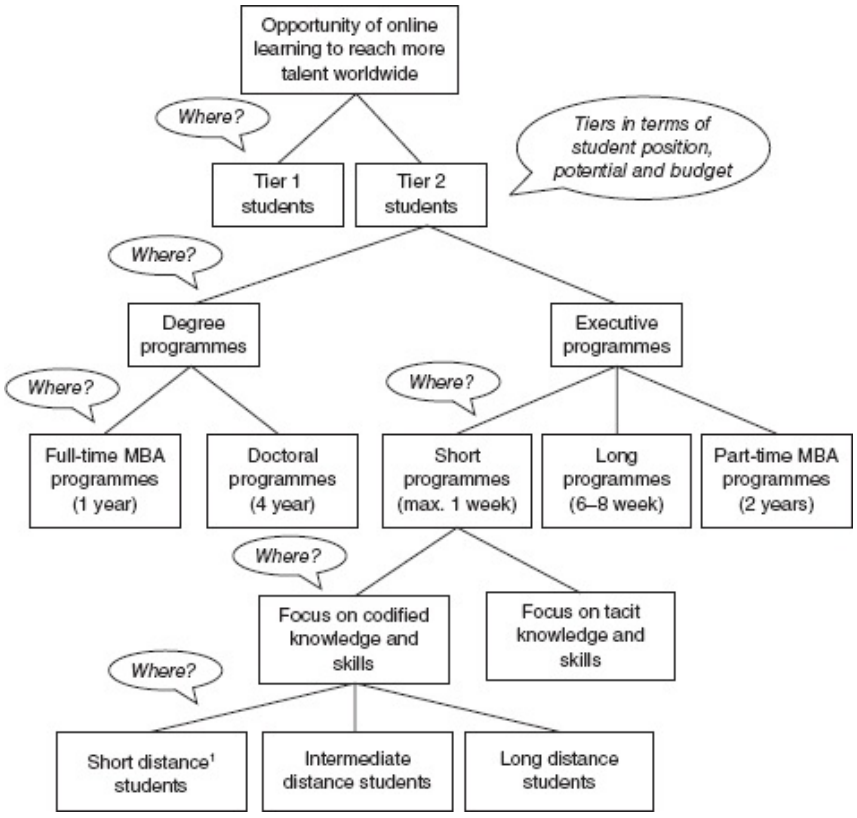

FIGURE 12.24 *Segment the opportunity gap*
Note: (1) Distance to campus

Formulate the key question

The consultants are able to formulate the key question: how should Ivy respond to the development of online learning technologies (the positive disturbing event) to reach a 5 per cent share of the global higher education market within ten years? Next, the consultants complete the opportunity statement. Table 12.3 displays this statement.

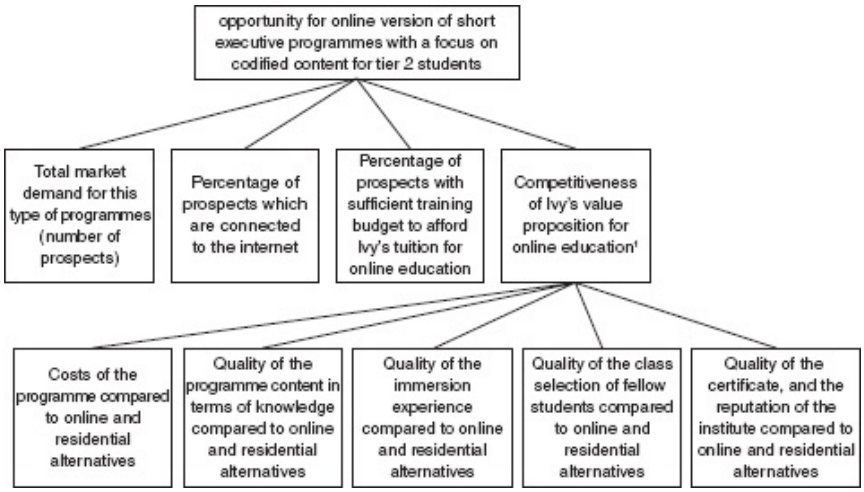

FIGURE 12.25 *Identify the segment opportunity*

Note: (1) Costs are author's addition. The other dimensions of competitiveness of educational propositions are based on Laseter (2012)

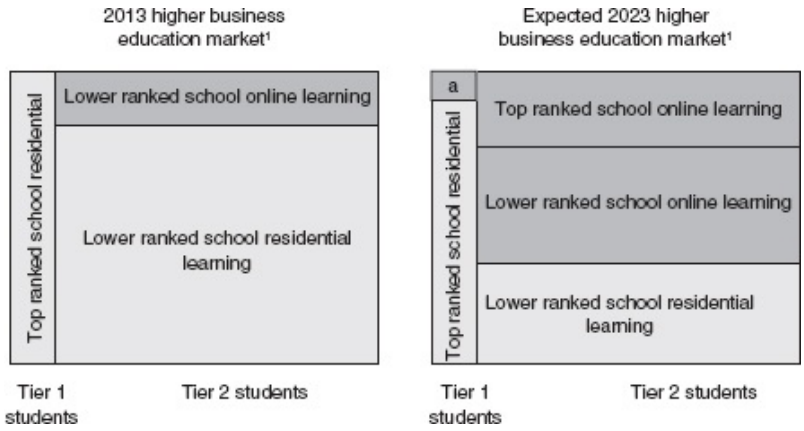

FIGURE 12.26 *The opportunity of online learning*

Note: (1) The surface indicates the share of a market segment; these are fictitious charts: they are not based on empirical evidence; a = top ranked school online learning

TABLE 12.3 *The opportunity statement*

Problem statement	Ivy Business School
Achieved result	Ivy has less than a 1 % share of the global higher business education market (degree and executive education).
Disturbing event	The development of online learning technologies
Desired result	Within 10 years, a 5 % share of the global higher business education market (*based on an estimation of the size of opportunity*)
Key question	How should Ivy respond to the development of online learning technologies to reach a 5 % share of the global higher business education market within 10 years?
Stakeholders	Ivy's board, faculty (in particular the star professors), support staff, students, and alumni
Constraints on the solution	• Maintain a high quality of education and publishing (premier knowledge) • Maintain high level admission standards • Alignment of (star) faculty
Decision criteria	• Quality of education and publishing • Quality, international composition, and volume of student intake • Ease of implementation • Risks • Financial results

EXERCISES

1. A management consulting firm, LargeConsultancy, faces a revenue gap. Last year the firm realized an amount of billings (revenues) that was below the desired level. Preliminary analysis reveals that there is no volume gap. The number of billed hours roughly equals the desired number. Therefore, a gap in billings per hour should explain the billings gap. Structure the possible drivers of this gap in billings per hour. The structure should have one level of maximally seven drivers. The drivers should be MECE.
2. A small manufacturer of sports cars, DriveFun, occupies a strong position in the high-end sports car segment of the automotive market. In the 1990s, DriveFun traded down by adding a cheaper model, The Rookie. DriveFun used to be highly profitable. Since the early 2000s, its profitability has deteriorated because the sports car market segment, in which DriveFun operates, became saturated, while competition within the segment increased. DriveFun's CEO is becoming increasingly worried. The company cannot trade down any further (adding even cheaper models) without eroding its high-end reputation. What should the CEO do? Assume the CEO has hired you as the consultant to solve the company's problem. Formulate the key question for the consultancy project.

3. A small trading company, InternationalTrading, sells four products (Products 1–4) in five countries (A, B, C, D, and E). InternationalTrading has a profit problem and it has hired you as a consultant to solve this problem. You have identified that the company's $2 million revenue gap explains most of the profit gap. Next, you want to segment this revenue gap. InternationalTrading's financial manager has produced a data table (see Table 12.4). How should you structure the data to segment the revenue gap in the most meaningful way? Use the data table to calculate the relevant segment sizes.

TABLE 12.4 *Data table*

Revenue gap	Product 1	Product 2	Product 3	Product 4
Country A	40	70	60	30
Country B	40	70	60	30
Country C	280	490	420	210
Country D	20	35	30	15
Country E	20	35	30	15

Note: revenue gaps are in thousands of US dollars

REFLECTIVE QUESTIONS

1. What do you consider to be the strengths of the structured problem diagnosing approach? Explain your answer.
2. What are its weaknesses? How might these weaknesses be overcome? Explain your answer.
3. For what type of consultancy projects is this structured approach most appropriate? For what type is it less appropriate? Explain your answer.

FURTHER READING

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13

STRUCTURED SOLUTION DEVELOPMENT

INTRODUCTION

Structured problem solving is a two-stage process. Chapter 12 introduced the first stage, which is the structured problem diagnosis. This chapter presents the second stage, structured solution development, which is indicative of the approach used by the top tier management consultants, such as McKinsey & Company, the Boston Consulting Group, and Bain & Company. We provide a step-by-step guide to developing solutions in a structured way. We illustrate the process with the running case study about AcStrat Consulting. The chapter closes with a summary, the running mini case study about the Ivy Business School, reflective questions, exercises, suggestions for further reading, and references.

Main learning objectives

- Understand the reasons for structured solution development.
- Understand the relevance of identifying the client's decision points.
- Know how to develop possible solutions.
- Know how to structure possible solutions.
- Know how to evaluate possible solutions.
- Know how to formulate a hypothesis.
- Know how to identify the assumptions of a hypothesis.
- Know how to structure the assumptions of a hypothesis.
- Know how to design analyses for testing the assumptions.
- Know how to collect data for the analyses.
- Know how to model the impact of a solution on the client's result.

- Understand the implications of uncertainty on solution development.
- Understand how to evaluate solutions under uncertainty.
- Understand how to make decisions about alternative solutions.

WHY USE A STRUCTURED APPROACH?

Why do consultants use the method of structured solution development? Because they want to recommend solutions that are effective, that is: solutions that close the client's result gap. The structured method forces consultants to identify and test the underlying assumptions of their solutions. Without the structured approach to solution development, some or all assumptions may remain hidden and will not be put to the test. An untested solution is a leap of faith.

The structured approach is also efficient. Through its use of hypotheses, the method avoids 'boiling the ocean'. Instead of investigating all possible solutions to the problem, the consultants will prioritize the options and take the most promising one as their initial hypothesis.

The structured solution development process

The solution is the answer to the key question: how to respond to the disturbing event to close the result gap or achieve the desired result? Figure 13.1 on the next page outlines the steps of the structured approach to solution development as used by the world's top tier consultants. Structured solution development is based on hypothesis generation and testing. If the consultants have to reject a hypothesis, they have to develop an alternative hypothesis. The solution development can therefore be an iterative process.

IDENTIFY THE DECISIONS

When consultants think about solutions they first think about the decisions their client may take. Solutions should close the client's result gap. Solutions should also imply decisions by the client. These decisions should imply actions. These actions should lead to closure of the result gap. Without actions no closure of the result gap occurs. When thinking about possible solutions, the consultants should identify what decisions the client may take. These decisions provide a foundation on which to generate ideas for solutions. As an illustration, Figure 13.2 gives a structure of decisions related to a new strategy.

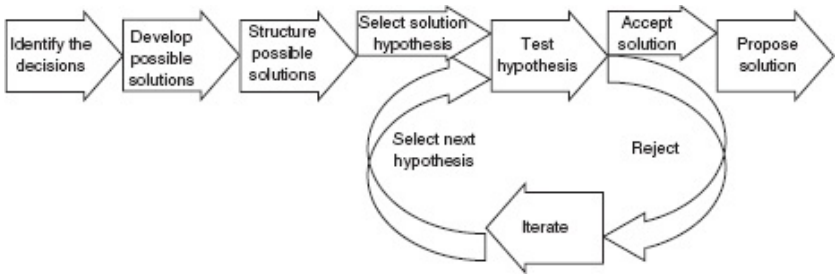

FIGURE 13.1 *The structured solution development process*

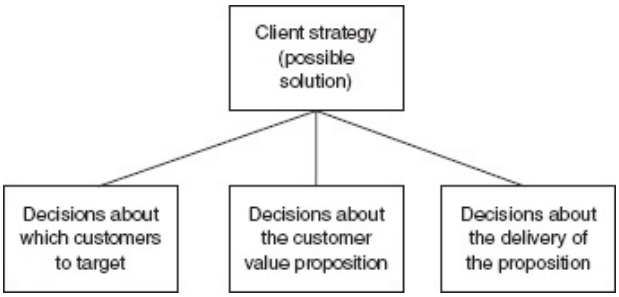

FIGURE 13.2 *Identify the decisions related to a new strategy*

Identify the decision outcomes

The set of decisions may lead to numerous options. For instance, assume the client may take three decisions. Let us call these decisions A, B, and C. Assume further that each decision is binary, which means that there are only two outcomes for each decision. This set of three binary decisions creates eight different outcomes. Figure 13.3 visualizes the corresponding decision tree. In real life the number of decisions may easily exceed three, while the number of outcomes may be higher than two. Imagine how the number of possible outcomes increases.

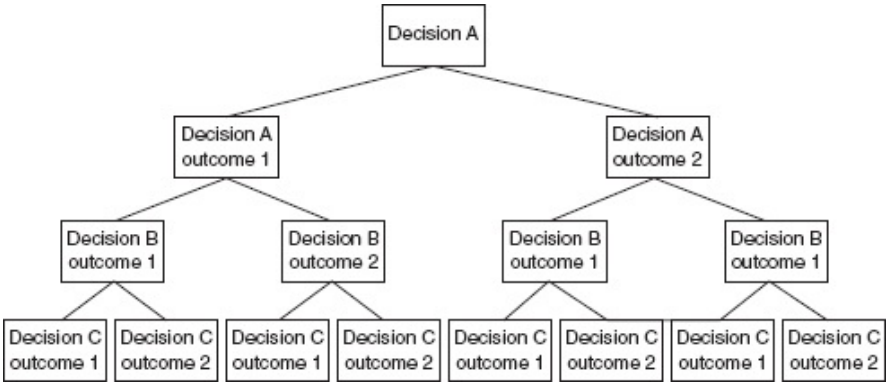

FIGURE 13.3 *Identify the set of decision outcomes*

Anticipate opposition

It is important to consider the tree of possible decision outcomes (see Figure 13.3). It provides a complete overview of all possible solutions. Although the client will ultimately choose one solution, the knowledge of all alternatives is valuable. During the final presentation of their recommended solution, but maybe also during interim presentations, the consultants may face opposition from the client or other stakeholders. They may be interested in alternative solutions. They could say: 'Haven't you thought of that solution?' or 'Why did not you consider that solution?' By having the complete structure of possible solutions (as visualized in the tree in Figure 13.3), the consultants may anticipate what alternative solutions the opposition may come up with.

CASE STUDY

AcStrat Consulting – identify the decisions

The previous chapter showed how the consultants developed a problem statement for AcStrat Consulting. The consultants formulated the following question: how should AcStrat Consulting respond to the changing demand and increasing scale and experience advantages to realize a profit per partner of Y $ within three years?

What decisions may AcStrat take?

What levers may AcStrat pull? The consultants identify the decisions that AcStrat may take to solve the problem. First, the consultants identify the key decision areas (see Table 13.1). Second, they identify for each decision area what options AcStrat has. These are the alternative decision outcomes.

TABLE 13.1 *Identify the decision areas and alternative outcomes*

Decision area	Alternative decision outcomes
Target clients (what clients to work for)	• Client industries o Maintain (currently, 20 industry practices) o Focus (reduce number of practices) • Client geographic scope o Maintain (currently, mainly Fortune Global 500 multinationals) o Shift to smaller and less internationalized companies
Scope of services (what services to offer)	o Maintain (currently, only strategy development advice) o Expand, in particular the inclusion of strategy implementation o Narrow down
Scale	• Maintain (currently, a relatively small player in terms of scale of operations) • Grow o Autonomous growth o Mergers o Alliances • Shrink
Cost	• Reduce costs o Indirect costs (currently, relatively high indirect costs) o Direct costs

DEVELOP POSSIBLE SOLUTIONS

Structure the solution development

It is not feasible, and certainly not efficient, to analyse all possible decision outcomes. Instead of 'boiling the ocean' of possible decision outcomes, the consultants will develop a selection of possible solutions. We can distinguish three ways in which consultants develop possible solutions:

1. Exploit the consultancy firm's collective experience.
2. Exploit the public domain knowledge.
3. Explore new solutions.

Exploit the firm's collective experience

KNOWLEDGE ACCUMULATION Most consultants, in particular the large firms, will first consider their accumulated experience. Have the consultants seen this problem (or opportunity) before, or have they seen a similar or somewhat related problem? The problem may be new to the client. It may even be new to the client

sector. However, the problem may not be new to the consultancy. Large consulting firms undertake large numbers of projects each year. Assume a consultancy firm with 10,000 consultancy staff. An average project team consists of three consultants and a project manager. Assume that a consultant is assigned to an average of four projects a year. The same applies to a manager. Such a firm will conduct 10,000 projects annually. Imagine how their knowledge from projects accumulates over the years. In a decade, this firm will have accumulated experience of 100,000 projects! Such a firm has probably seen all types of problems and opportunities in all kinds of organizations and all types of sectors or industries.

KNOWLEDGE MANAGEMENT Whether the consultancy can exploit its collective knowledge depends on how well the firm has organized its knowledge management. If the consultancy has a sophisticated knowledge management system, then the consultants will have access to this accumulated knowledge. IT systems may offer the codified knowledge, whereas the organization of the firm's experts (the functional and industry practice groups) may supply the tacit knowledge. Codified knowledge may refer to a procedure type consultancy, while tacit knowledge may refer to a grey hair type of consultancy. The knowledge system may offer structures for possible solutions for all types of client problems and opportunities. Probably, such systems will have solutions organized by client sector. For each type of problem, they will have solutions differentiated by client sector. These solutions are not generic but client sector-specific. Imagine the efficiency benefits that such knowledge brings to the consultancy project. Firms with such knowledge management are able to deliver their projects faster and at lower costs than firms that lack such knowledge.

Exploit the public domain knowledge

CUSTOMIZE STANDARD FRAMEWORKS The collective experience of a particular consultancy firm as embodied in its knowledge management system is private domain knowledge. It is proprietary knowledge of that specific consultancy firm. Some proprietary knowledge diffuses into the public domain. The public domain knowledge is available to all. This knowledge is distributed over business school curricula, print media (articles, books, and reports), and the internet. The consultants may tap into this public domain knowledge to develop possible solutions. The consultants may choose standard analytical frameworks from the public domain. These standard frameworks are by definition generic. Consultants may use these frameworks as a starting point. They may customize these frameworks to make them fit the specific situation of their client.

EXAMPLES OF FRAMEWORKS Take for instance solutions for strategy

problems and opportunities. The strategy map by Kaplan and Norton is a framework for developing such solutions (Kaplan and Norton, 2004). Porter's competitive forces framework may also be a starting point for solution development (Porter, 1985), while the Blue Ocean strategy canvas is a framework for (marketing) strategy development (Kim and Mauborgne, 2005). The 4Ps of the marketing mix are another framework for marketing strategy development. Ohmae's 3-C framework may also be useful for solution development (Ohmae, 1991). Ansoff's growth strategies provide a valuable structure for developing growth options (Ansoff, 1957). The BCG matrix and the GE-McKinsey matrix may be helpful for generating solutions about a corporate portfolio strategy. Consultants may use Porter's value chain concept to develop solutions for processes (Porter, 1985). The McKinsey 7-S model may be valuable to develop solutions that involve the organizations. This is not an exhaustive list but a selection of examples.

Explore new solutions

NEW PROBLEMS The client's problem (or opportunity) may be new to the world. Sometimes, new problems and opportunities will emerge that are new to the client and the consultants. An example was the rise of the new economy in the 1990s as a result of the internet. The internet made new business models possible. Depending on the client's perspective, these models were new opportunities or new problems. Consultants did not have experience with these problems. Therefore, they needed to explore new solutions. Exploiting existing knowledge refers to a procedure type and grey hair type of consultancy. Exploring new knowledge fits with a brain type of consultancy.

Exploring solutions is necessary for the consultant if the problem is new to that consultant. If they do not have experience with a particular problem, and if there is no public domain knowledge available about that problem, then they need to explore a solution to that problem.

STRUCTURED BRAINSTORMING Consultants may use divergent thinking to explore new solutions. Brainstorming is an obvious technique for idea generation. The consultants may invite knowledgeable stakeholders from inside and outside the client organization, with different perspectives. The consultants create a setting which stimulates divergent thinking about solutions for the problem. Such brainstorming may take the form of a workshop. Consultants typically limit divergence to a certain extent. It is not brainstorming in the sense of generating ideas at random. The consultants apply structure to the development of possible solutions in the following ways. First, the point of departure for idea generation is the key question. All ideas should answer this question. Second, ideas should take into account the possible

decision areas that the client has to consider.

STRUCTURE POSSIBLE SOLUTIONS

Mutually exclusive

After generating ideas for possible solutions, the consultants will want to create an overview. They will filter the ideas. Not all ideas pass the constraints and criteria imposed by the clients (see the problem statement). Next, the consultants will divide the remaining solutions into a logical structure. Most important is to ensure that these solutions are mutually exclusive. Consultants want to avoid overlap of possible solutions because in the next stage they want to investigate those solutions. If different consultants in parallel investigate solutions which are overlapping, then the consultants' investigations will imply duplicate work. In the chapter about problem diagnosis we emphasized the importance of logical structuring of a subject into elements which are both mutually exclusive and collectively exhaustive.

Not collectively exhaustive

In solution development, creating a collectively exhaustive set of possible solutions is not an end but a means. It ensures that the consultants do not overlook any possible solution. However, in practice it may be too unwieldy. Therefore, consultants have to create a balance between costs and benefits. There is a trade-off between, on the one hand, the time opportunity costs of trying to exhaust the number of solutions, and on the other hand, the value of the additional solutions. At some point, the consultants will have included the most relevant solutions. They may use the steering committee and other knowledgeable stakeholders inside and outside the client organization as a sounding board to verify whether they have identified the most relevant solutions. The remaining solutions – not included in the structure – may only have theoretical value. But they are less relevant compared to the solutions already included. It is more important to have the most relevant solutions in the structure, than to have all the (theoretically possible) solutions in the structure. The consultants do not strive towards a collectively exhaustive structure of possible solutions.

SELECT A HYPOTHESIS ABOUT A POSSIBLE SOLUTION

The problem statement

How do consultants select a possible solution from the solution structure to use as their initial hypothesis? The consultants may use the problem statement as a guide. The problem statement contains the client's decision criteria. How does the client

compare and evaluate alternative solutions? What does the client consider most important? Is the client only interested in the solution's contribution to the result, or do other factors play an important role as well? Other factors may include the ease of implementation of a solution or the level of risk involved in a solution. The consultants need to know what solution characteristics determine client satisfaction. With what type of solution will the client be satisfied? Of course, it is difficult for consultants to evaluate a possible solution before they have investigated it. Selecting the hypothesis to a large extent depends on the consultants' judgement. The experience of the consultants plays an important role here. If they have done similar projects in the past, then they may use these analogies to judge the possible solutions. The consultants may also solicit feedback from knowledgeable stakeholders inside or outside the client organization.

Initial hypothesis

The consultants select the possible solution that seems most promising in terms of the client's decision criteria. Subsequently, the consultants formulate their initial hypothesis. Recall that the hypothesis is a possible answer to the key question. Therefore, the consultants formulate the hypothesis as an answer to that question. Typically, the hypothesis takes the following form: if the client does [the solution], then the client closes the result gap. Or in short: the [solution] creates the desired result.

CASE STUDY

AcStrat Consulting – select a hypothesis

The consultants explore the most probable solutions and put them in a structure (see Figure 13.4). Next, they select the candidate solution to serve as the initial hypothesis. This hypothesis consists of two sub-hypotheses at different levels of the structure (see the boxes with italic text).

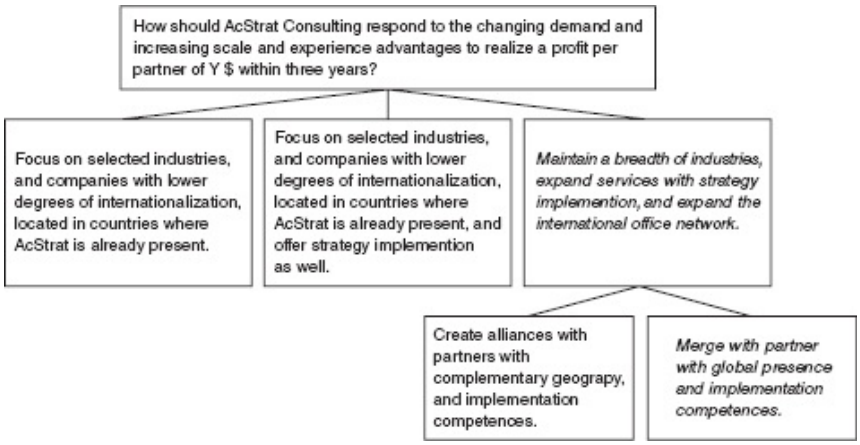

FIGURE 13.4 *Select a hypothesis*

TEST A HYPOTHESIS

Forms of inferencing

Before the consultants can recommend a solution to the client, they need to verify this solution. The consultants' hypothesis is an untested solution. The consultants have to test their hypothesis. How do consultants test a hypothesis about a solution? This hypothesis testing differs from hypotheses about possible causes of the result gap. In the problem diagnosis, we discussed abductive inferencing. Abduction is appropriate for seeking explanations for a given result. However, for testing a solution, the consultants will use other forms of inferencing. The preferred option is deduction. If deduction is not feasible, then consultants may resort to induction (see Figure 13.5).

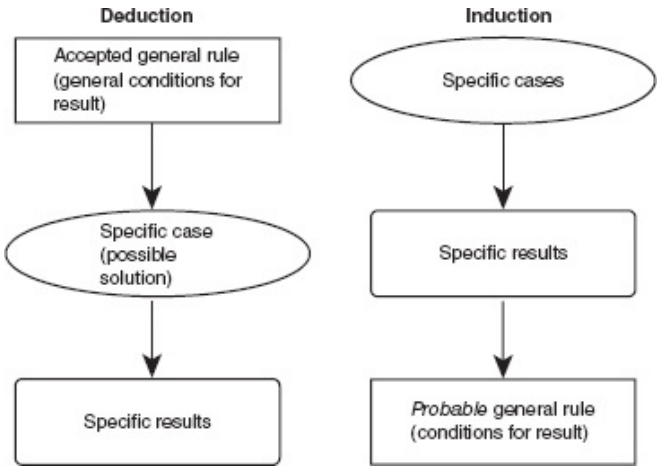

FIGURE 13.5 *Two types of inferencing for solution testing*

Deductive inferencing

Deduction moves from the general to the specific. The point of departure is the general rule. For deductive inferencing about solutions, the consultants need to determine the generally accepted conditions for the results of a solution. Under what circumstances will the implementation of the solution deliver the desired result? The consultants need to identify and structure these assumptions. When structuring the assumptions, it is essential that these are mutually exclusive and collectively exhaustive. Completeness is important because all assumptions need to be satisfied for the solution to be effective. Consultants may use the management literature to identify the general conditions of a solution. For instance, if the solution is a strategy, then the consultants may consider using the 3-C framework by Ohmae (1991). According to this framework, the three critical success factors of a strategy refer to customers, competitors, and the company. The solution should include a value proposition that focuses on the specific needs of selected customers. The proposition should meet not only today's customer needs but also future needs. The proposition should contain an advantage over competitors. The proposed proposition should beat both the existing as well as future propositions by both incumbent players and new entrants. Finally, the company should be able (have the competences or be able to develop the competences) to deliver the proposition in a cost effective manner. We may interpret each success factor as a condition for a result, or as an assumption for the hypothesis about the solution. If the consultants use deductive referencing, then they have to test the assumptions of their hypothesis. The assumptions in Figure 13.6 are the general conditions for a price reduction to generate the desired result.

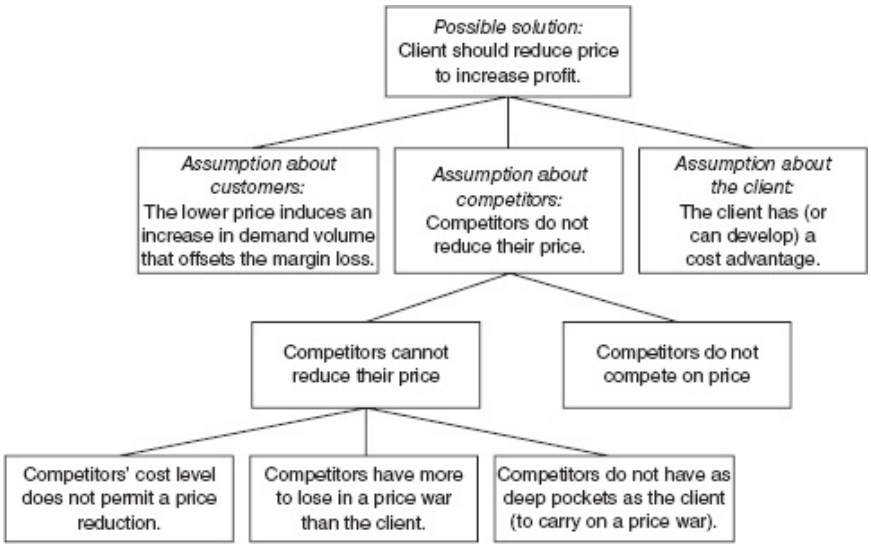

FIGURE 13.6 *Identify and structure the assumptions for a price reduction*

CASE STUDY

AcStrat Consulting – identify and structure the assumptions

The consultants identify the assumptions of their hypothesis, which consists of two sub-hypotheses. For each sub-hypothesis, the consultants identify the underlying assumptions (see Table 13.2).

TABLE 13.2 *Identify and structure the assumptions*

Sub-hypothesis	Underlying assumptions
Maintain targeting of current markets but increase international presence and add strategy implementation.	• Current target markets offer opportunities for seizing scale advantages. • International presence allows an opportunity to seize the increased demand for global projects. • Including implementation services meets the increased demand for bundling strategy development and implementation.
Merge with partner with global presence and implementation competences.	• There is a partner with global presence and implementation competences interested in a merger with a strategy consulting firm. • A merger between AcStrat and the partner offers attractive synergies. • It is possible to integrate the two organizations. • There are no alliance partners with complementary office networks and implementation competences. • In a declining market, a merger is more attractive than autonomous growth. • AcStrat does not have the financial resources to invest in international expansion and the development of implementation competences for autonomous growth.

Inductive inferencing

An alternative to deductive inferencing is inductive inferencing. The consultants do not test the general conditions but investigate specific cases about other firms. Figure 13.7 on the next page illustrates inductive inferencing. If the sample of cases is representative and substantial (for clarity reasons, the figure only shows three cases), then the consultants will infer that a price reduction will probably lead to a profit increase. Based on that conclusion the consultants may recommend that the client reduces its price to increase its profit.

Create the first draft of the final presentation

After formulating the initial hypothesis and structuring the underlying assumptions of that hypothesis, the consultants will already create the first draft of their final PowerPoint presentation to the client. The consultants will create an overall structure for this presentation (see Chapter 14). Moreover, they will design the individual PowerPoint slides for this presentation. Because the consultants have not yet collected and analysed the data, they will use the expected outcomes in their slides. After the analyses, the consultants will replace the expected outcomes of analyses with the actual outcomes. If they have to reject their initial hypothesis, and refer to an alternative hypothesis, then the consultants will adapt their draft of the final presentation accordingly. Chapter 14 will elaborate on the structuring of presentations and the design of slides.

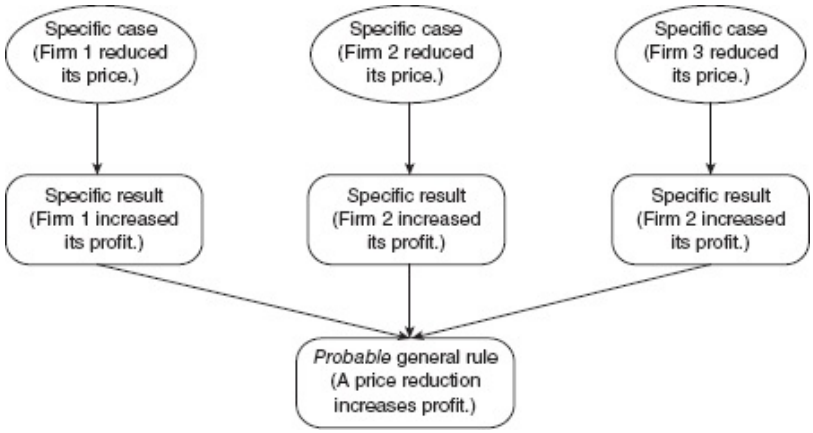

FIGURE 13.7 *Inductive inferencing*

DESIGN THE ANALYSIS

Standard versus custom analyses

The test of a hypothesis means tests of each assumption underlying the hypothesis. To test an assumption, the consultants may use standard, off-the-shelf, analytical frameworks, or they may design or use a customized framework. Some examples of standard frameworks are Porter's competitive forces framework, the value chain framework, and the McKinsey 7-S model. However, the standard frameworks may not suffice for all assumptions. In such cases, consultants may design analyses for the specific purpose of analysing that particular assumption. The archetype designs for consultants' custom analyses are the driver analysis and the benchmark analysis.

Driver analysis

LOWER THE LEVEL OF ABSTRACTION One popular analytical design is the driver analysis. Consultants measure a subject through its drivers. Measurement of a subject requires facts. Some subjects are too abstract to measure directly. The idea is to focus on the subject's drivers because they are more concrete then the subject. The subject may be the volume of market demand, the price of a product, or the cost of manufacturing a product.

AN EXAMPLE OF A DRIVER ANALYSIS For example, the client is a manufacturer of cat food and faces stagnating demand in its home country, which results in decreasing profits. The consultants have formulated a hypothesis about entering a new host country to increase profits. The consultants need to verify the assumptions underlying their hypothesis. One assumption is that the new host country provides sufficient demand for cat food. The question arises: what drives the volume of demand for cat food in that country? Figure 13.8 gives an example of the drivers of the demand for cat food. It is essential that the drivers form a logical structure: the drivers are mutually exclusive and collectively exhaustive. They should be measurable. The consultants can find facts for three out of five drivers in Figure 13.8:

1. The number of households in the country.
2. The share of households with one or more cats.
3. The average number of cats per household with one or more cats.

Some drivers may be too abstract to measure directly. In the example, the remaining drivers are too abstract: 'share of households that feed their cats with cat food' (some households may give their cats the leftovers of human food), and the average consumption per cat. The consultants have to identify the drivers of these abstract drivers to arrive at a lower the level of abstraction. Consultants will continue identifying drivers of drivers until they arrive at a low enough abstraction level, where they can find the facts to measure the drivers.

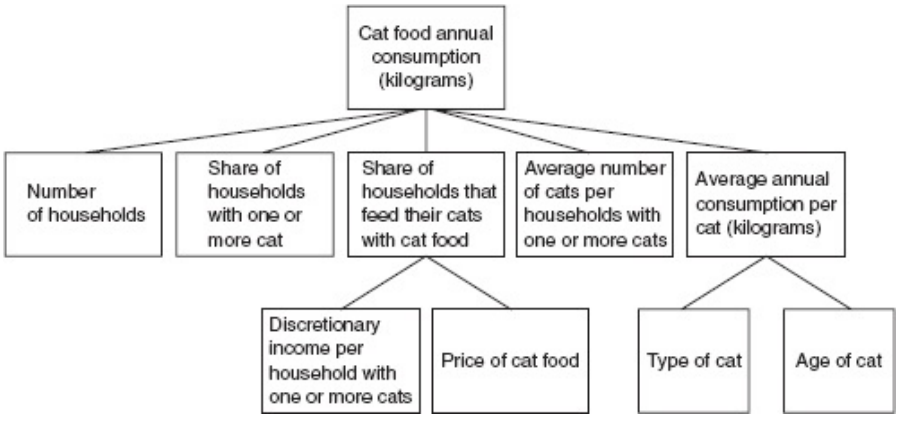

FIGURE 13.8 *Structure of the drivers*

Benchmark analysis

COMPARE SUBJECTS Benchmarking is another popular analysis design among consultants. Benchmarking is comparing subjects. For competitive analysis in particular, consultants may use benchmarking. For instance, consultants may benchmark the costs of the client and its main competitors. They may also compare the value propositions of the client and its competitors. For example, how do the product quality, performance, and price of the client's product compare to those of the competition?

Combine driver and benchmark analysis

Consultants may combine a driver analysis and a benchmark analysis. They may also compare drivers. In the cat food example, the consultants may use a comparison of drivers in the home country and drivers in the host country. Such a comparison may, for instance, help to assess the host country's share of households that feed their cats with cat food. Assume that the consultants have data about the level of discretionary income and the level of cat food prices in both countries. The comparison (see Figure 13.9) shows that the drivers are more favourable for the host country. Therefore, they may assume that the host country's share of households that feed their cats with cat food will probably be at least as high as in the home country. This is a highly simplified example. If the consultants have data about a large number of countries, then they can use statistical analysis to assess the host country's share of households that feed their cats with cat food.

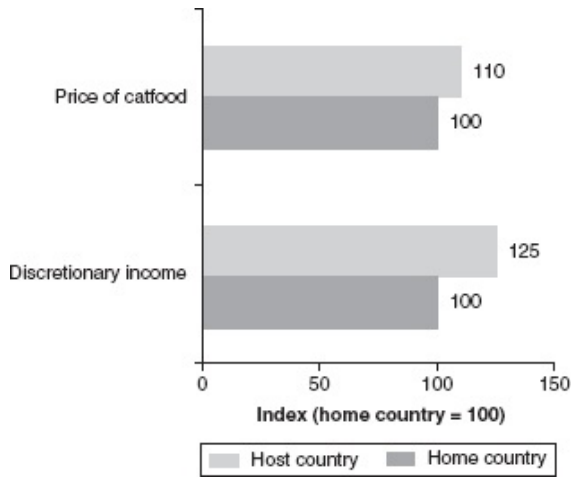

FIGURE 13.9 *Benchmark*

CASE STUDY

AcStrat Consulting – design the analysis

Two years ago, a consultancy firm named Delta Consulting showed interest in a merger with AcStrat. At that time, AcStrat refused to discuss a merger. However, at present, AcStrat is interested. Delta is still willing to discuss a merger between the two firms.

As an example, we focus on one of the assumptions for the merger: 'A merger between AcStrat and the partner offers attractive synergies'. This is a relatively high-level assumption. To analyse it we need to lower the level of abstraction (see Figure 13.10). We consider one of the lower-level assumptions underlying the high-level assumption: 'AcStrat and Delta can increase sales and/or decrease costs by aligning their market positions'. Subsequently, we consider an even lower level of abstraction. We focus on one of the underlying assumptions of the low-level assumption. This lower-level assumption is: 'AcStrat and Delta can cross sell their services'. Cross-selling means that the two firms can sell their services to each other's clients. This assumption is concrete enough to be tested by means of analysing it.

Based on the assumption 'There are opportunities for cross-selling', the consultants' design uses the following analyses:

- driver analysis of cross-selling opportunities
- benchmark analysis of cross-selling opportunities in other mergers

The consultants identify the data requirements of their analyses. They need data about the clients of AcStrat and Delta.

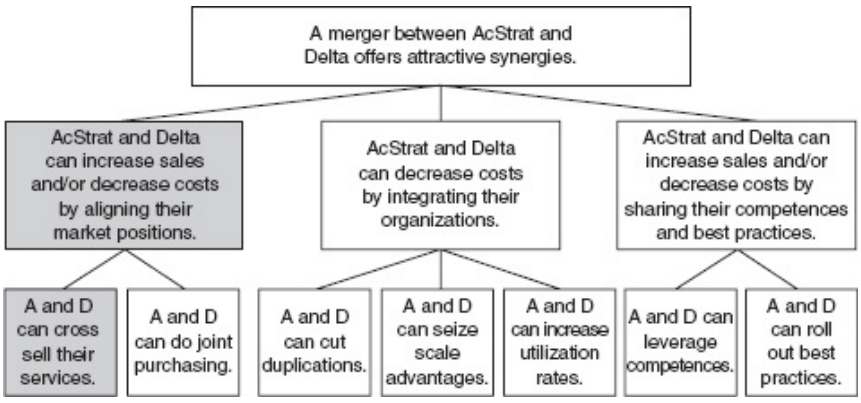

FIGURE 13.10 *Structure of assumptions at different levels*
Notes: A refers to AcStrat, D refers to Delta.

COLLECT THE DATA

Hypothesis-driven data collection

Consultants have to collect the data to test the assumptions in their hypothesis. What data do the consultants need? The hypothesis determines the data needs. Without a hypothesis, the consultants may be tempted to try to 'boil the ocean'. All data may seem relevant. With their hypothesis, consultants will know exactly what data they need to test the hypothesis. Figure 13.11 visualizes the relationship between the hypothesis and the data.

Without data, consultants cannot test their hypothesis. Without tests, the consultants lack the strength of fact-based argumentation to convince the client of the value of their recommended solution. Therefore, the structured solution development method relies on data collection. The data should be representative of the subject to be analysed. Consultants should refrain from biased testing. They have to resist the temptation to filter the data that support their hypothesis. This is the so-called 'confirmation bias'.

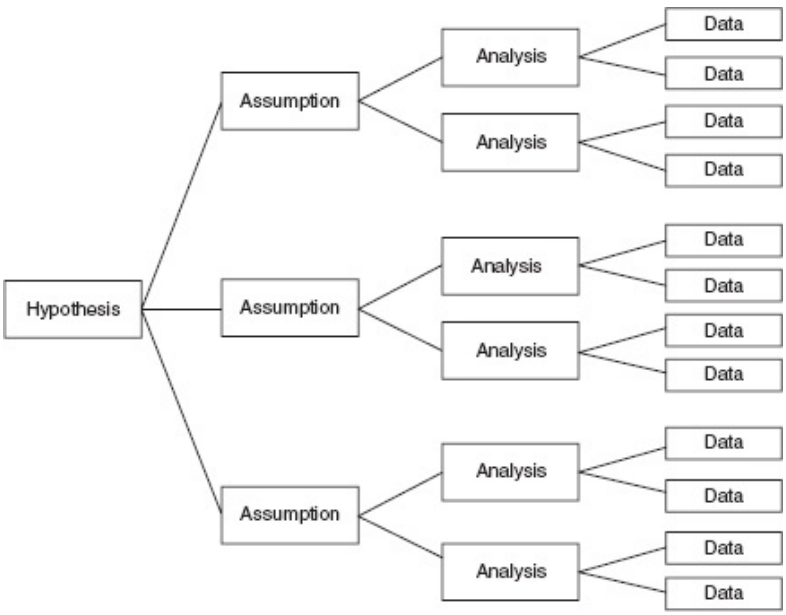

FIGURE 13.11 *From hypothesis to data*
Note: The number of assumptions, analyses, and data may vary by hypothesis.

Data sources

The consultants have defined the data requirements. The next question is: where to collect the data? Figure 13.12 distinguishes between desk research and field research. Desk research is about data that are already available and stored inside or outside the consultancy firm. Field research is about collecting new data that do not yet exist. Consultants have to go out (in the field) to collect these via one or more techniques: interviews, observations, surveys, and experiments. Consultants start with the easiest sources, and if these sources do not provide all the required data, then consultants will move to increasingly difficult sources. Typically, consultants begin with desk research and after exhausting this source they initiate field research to collect the remaining data.

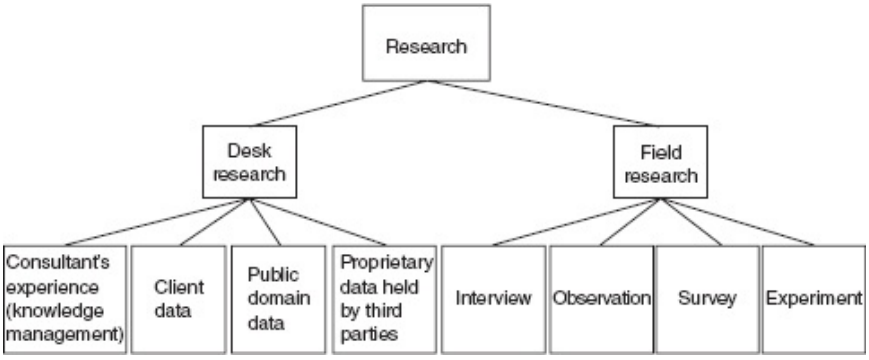

FIGURE 13.12 *Research by consultants*

Desk research

CONSULTANCY KNOWLEDGE Consultants always start with the data they already possess. They look inside the consultancy firm for the accumulated knowledge. Large firms typically have knowledge management systems where consultants may look up information by industry practice and functional practice. Consultancy firms not only have information stored in IT systems. The people in the firms are also carriers of (tacit) knowledge. Consultants that search for data should therefore not just check the databases of the firm's knowledge management system, they should also consult colleagues with relevant experience and expertise. To facilitate such consultation, consultancy firms may have an overview of experts by subject. For each expert the overview provides the contact details.

PUBLIC DOMAIN DATA After having exhausted their internal data sources, the consultants will look outside the consultancy firm for the further data they need for their analyses. The consultants may explore the public domain sources. For instance,

they may use official statistics and other publications by governments and industry associations, but also the (digital) news media may provide relevant data for the consultants.

CLIENT DATA A third important data source is the client. The client may have relevant data ready for the consultants. Besides the external (financial) reporting, the client may have all types of internal data which the consultants may need for their analyses. The internal audit department may be a rich source. But other departments, such as HR and corporate planning, may also provide valuable data.

Although the client may have a lot of data, this does not always mean that those data will be readily available to the consultants. Not all client organizational members may be open to the consultants. Some may fear the consultants may use the data against them. They may want to cover up their mistakes and weaknesses. Such people may become defensive and they may even sabotage the consultants' attempts to collect data. Consultants may therefore have a hard time obtaining the required data from the client organization.

PROPRIETARY DATA FROM THIRD PARTIES A fourth and final source of already available data that may be collected through desk research is proprietary data held by third parties, other than the consultants and the client. These third parties may be research agencies or other consultancies. They will have collected data which they have not make public. They may share their data for a fee. For instance, research agencies sell their research reports or sell access to their databases for a fee. If consultants cannot find such data elsewhere they may buy the data from these third parties (typically they will have negotiated with the client that the client will reimburse the expenses).

Field research

GIVING UP IS NOT AN OPTION If desk research does not offer a solution, then consultants have to turn to field research. We already mentioned that collecting data from some client members may be difficult. However, field research can be especially hard work. One of the reasons why clients may hire consultants is that consultants persevere more in data collection. They are prepared to go further and dig deeper to uncover the data required.

On a consultancy project, junior consultants typically have to collect the data. However, the challenge of data collection may in some cases prove to be too much for them. They may therefore be tempted to give up and go back to their project manager to explain that the data task is impossible. 'I am sorry, but it is impossible to get that data'. Although understandable (from the point of view of the consultant), such an

attitude is not acceptable to the project manager (and the consultancy firm). The consultant will not get away with this.

CREATIVITY AND HARD WORK When confronted with difficulties in collecting the data, the consultants should try harder and be creative in order to obtain the necessary data. For instance, a consultant needs to estimate the expenditures on advertising by a client's competitor. What if the competitor does not publish that kind of information? The consultant may count the number of commercials in the media. Next, the consultant may multiply this number by the usual fee to arrive at an estimate of the advertising expenditures. Another example is where a consultant needs to estimate a competitor's overhead. The competitor is privately held and therefore does have to report detailed financial results. The consultant may resort to more creative ways of data collection. They may for instance take a closer look at the competitor's office building. They may collect information about the office space (number of square meters) and deduce from that space how many staff the competitor employs. In another example, a consultant needs to estimate the production volume of a competitor's manufacturing plant. The consultant may position themself at the gate of that plant and count the number of incoming and outgoing trucks. This seems monkish work but it may give the consultant (and the client) valuable data.

COMPETITIVE INTELLIGENCE Gathering data about the competition is one of the most difficult challenges. In many cases, the hypotheses of consultants will contain assumptions about the competitors of the client. For example, in the case of a solution for a client's problem, the consultants have to make assumptions about whether and how the client's competitors may respond to the client's solution. Another example here is the opportunity for the client. The consultants have to make assumptions about whether and how the client's competitors may seize this opportunity. Therefore, the consultants need to gather data about the client's competitors. Figure 13.13 visualizes some main sources of competitive intelligence.

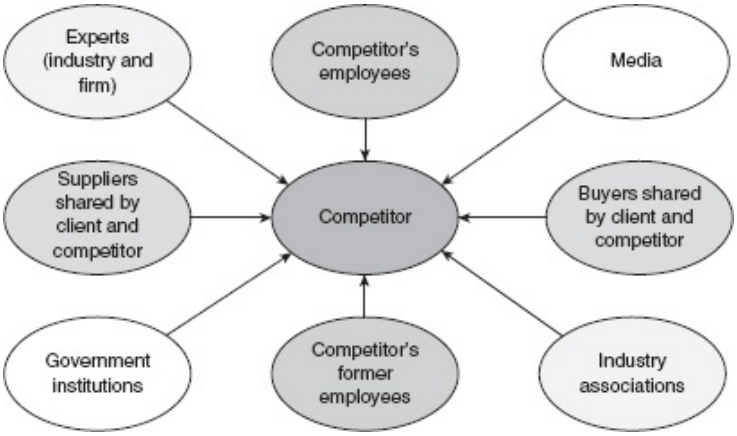

FIGURE 13.13 *Some main sources of data about a competitor*

GREY AREAS Desk research is in most cases insufficient for competitive intelligence. Data published by the competitor (such as websites and annual reports), the media, and reports by governments and industry associations may be helpful but not sufficient. Therefore, consultants will need to do field research on the client's competitors. Of course, their data gathering activities should not break any law. Moreover, the consultants should refrain from entering grey areas in terms of ethics. How ethical is it to interrogate people covertly (where the interviewee is not aware of the real purpose of the interview) about a competitor?

EXPERTS The publicly shared knowledge – through, for example, reports and websites – by experts within industry associations and government institutes may only provide a part of their knowledge. Consultants may probe the privately held knowledge of experts through interviews with these individuals. They may then do the same with other firm experts and industry experts, such as investment analysts and specialized journalists. These experts may be willing to share more insights in a personal interview. It helps if the consultants can share some interesting data with the experts, thereby creating a 'win-win situation'.

SHARED BUYERS AND SUPPLIERS One step further in terms of ethics is to interview the buyers of the client who also buy from the particular competitor that the consultants need to investigate. Some consultants may interview the so-called 'shared' buyers. Some consultants may do the same with suppliers of the client who also supply to that particular competitor, the so-called 'shared' suppliers.

FORMER EMPLOYEES Taking another step further in terms of ethics, some consultants might interview former employees of that competitor. Some former personnel of that competitor may now be employees of the client.

COMPETITIVE INTELLIGENCE FIRMS There are specialist competitive intelligence firms – *not* management consultancy firms – that would go further and covertly interrogate former employees and even current employees of the competitor. These competitive intelligence firms work for clients not for consultants. We would like to emphasize that such intelligence practices are unethical and that these intelligence practices do not belong to management consultancy. Such competitive intelligence firms may use former state intelligence officers.

These intelligence firms may seek out former employees of the competitor that are currently active elsewhere. Social media are very helpful in this respect. These intelligence firms may covertly interrogate these people, carefully hiding their real

purpose, which is collecting competitive intelligence. Finally, some intelligence firms may even approach current employees of that competitor. The intelligence firms may come into contact with these employees via various routes, among which are trade shows, conferences, networking events, or an informal setting, such as Friday afternoon drinks in a local bar near the competitor's office.

Precisely because such competitive intelligence constitutes a grey area, some clients may want to outsource this to intelligence firms. Management consultants will refrain from such practices.

ANALYSE THE ASSUMPTIONS

The work plan

The project manager of the consultancy firm typically develops a work plan (see Chapter 11). The plan is the basis for delegating the tasks to the project team members. The project manager uses the plan to divide the work among the team members. The work plan should give detailed and concrete instructions to the team members and may cover one or more hypotheses. For each hypothesis, the work plan elaborates all assumptions. Table 13.3 provides a simplified elaboration of one assumption of a hypothesis.

TABLE 13.3 *Plan the work for a hypothesis test*

Assumption	Sub-assumption	Analysis	Data	Data sources	Deliverable	Consultant	Deadline
Assumption 1: Country X is an attractive market.	Market is large.	Driver analysis	Households; cats per household; consumption per cat	Government statistics; market research reports; client data	Bar chart comparison of market in country X and other countries	Jim	June 1
	Market growth is high.	...	...	...		...	...
	Profitability of incumbents is high.						
Assumption ...	...	...	...	...		...	...

CASE STUDY

AcStrat Consulting – analyse the assumptions

Analysis: current combined revenues

The consultants collect data about clients of AcStrat and Delta and the revenues for these clients. Based on the data, the consultants identify three areas for cross-selling (see Table 13.4).

Analysis: expected cross-selling opportunities

The consultants calculate the ratios between the revenues of the three service categories for the overlapping clients (strategy development : strategy implementation : other services = 1 : 5 : 10). Let us assume that these ratios may be applied to the other (non-overlapping) clients as well. Based on this assumption, they calculate the cross-selling opportunities (see Table 13.5). We would acknowledge that this assumption may be an oversimplification. The non-overlapping client bases of AcStrat and Delta probably differ from the overlapping clients. As a consequence, the revenue ratios may differ from those of the overlapping clients. However, this assumption is beyond our simplified example.

TABLE 13.4 *Identify the areas for cross-selling*

Revenues (mln USD)	Strategy development	Strategy implementation	Other services provided by Delta	Total
Overlapping clients	125	625	1250	2000
AcStrat only clients	400	X sell opportunity	X sell opportunity	400
Delta only clients	X sell opportunity	4000	8000	12000
Total	525	4625	9250	14400

Note: ‘X sell’ refers to cross sell; ‘overlapping clients’ refers to organizations that are both clients of AcStrat and clients of Delta

TABLE 13.5 *Analyse the cross-selling opportunities*

Revenues (mln USD)	Strategy development	Strategy implementation	Other services provided by Delta	Total
Overlapping clients	125	1250	2500	3875
AcStrat only clients	400	2000	4000	6400
Delta only clients	800	4200	8400	13400
Total	1325	7450	14900	23675

UNCERTAINTY

Future solutions

There are limits to what data collection may contribute to hypothesis testing. Data are by definition about the past. There are no facts about what will happen in the future. Only if one assumes that the future will be like the past, can one extrapolate historical facts. However, this is a dangerous assumption.

The consultants' recommended solution is always about the future. The client has not yet implemented the solution. First, the client needs to adopt the consultants' recommended solution. Then the client needs to implement the solution. Implementation takes time. Therefore, we may conclude that solutions are about the future.

As solutions are about the future, and because there are no facts about the future, consultants cannot test a hypothesis about a solution before that solution has been implemented. Therefore, the consultants cannot guarantee certainty when they recommend a solution to their client. At best, the consultants' analyses of the assumptions underlying the hypothesis may indicate the likelihood that the solution will generate the predicted result. Of course, the level of uncertainty may vary by the type of client problem or opportunity. For instance, compare a consultant's recommended solution for a cost reduction in the client's operations with a recommendation to enter an industry that is completely new to the client.

Chart the key uncertainties

DEVELOP SCENARIOS We will discuss two techniques that consultants may use for dealing with uncertainty. First, consultants may chart the key uncertainties that face the client. The consultants may identify what are the main drivers of uncertainty. Based on these drivers, the consultants may develop alternative scenarios for the future. For instance, the client is the European airplane manufacturer World Aircraft Corporation (WAC). WAC faces increasing competition from manufacturers in the emerging markets, which reduces its profit. The firm has hired management consultants to provide advice about how WAC should respond to this competition in order to return to its original profit before the increase in competition. Which solution may work best for WAC depends among other things on how the global airplane market develops. The consultants identify some main drivers of uncertainty in this market, among which are the price of jet fuel and the degree of regulation of markets (see Figure 13.14 on the next page). The fuel price influences the volume of air

transportation, and thus the number of airplanes required, as well as what type of airplanes will be most in demand. The degree of market regulation also influences how the volume for air transportation will develop, and consequently it influences the demand for airplanes, both the number of planes and the mix of types.

FIGURE 13.14 *Develop scenarios*

DRAW DECISION TREES In the project for the airplane manufacturer WAC, the consultants may develop a hypothesis about a price reduction. The hypothesis says: reducing the prices enables WAC to return to its original profit level under the increasing competition from emerging market competitors. A price reduction is effective in securing profit if the following conditions are met: either the price reduction leads to increased demand (implying a high price elasticity of demand), or the competitors cannot or will not match the client's price reductions. These conditions represent the assumptions. In this case both assumptions need to be verified to accept the hypothesis. The consultants build a financial model (in Excel) to calculate the client's profit under the different values in these two assumptions. Based on these calculations, the consultants may draw a decision tree to chart the uncertainties (see Figure 13.15 on the next page).

Conduct a sensitivity analysis

ASSESS THE IMPACT OF UNCERTAINTY In the second technique for dealing with uncertainty, the consultants may assess the impact of uncertainty on their solution. How will uncertainty affect the result of the solution? The sensitivity of a solution to uncertainties determines the value of that solution. Assume that in the project for WAC the consultants identify in total three main drivers of uncertainty: fuel price, market regulation, and economic growth. For each driver the consultants

may estimate how the different values of drivers create different profit levels for their client. The consultants use their financial model to calculate the profits under the different values of these drivers. Figure 13.16 on the next page visualizes the impact of the different drivers on the client's result. The consultants rank the drivers by the spread between the lowest result and the highest result. The driver which creates the largest spread has the largest impact on the result. The result is most sensitive to that driver. The consultants rank the drivers in descending order of their spread, or in descending impact on the result. Because the bars in Figure 13.16 resemble a tornado, the figure is called a tornado diagram.

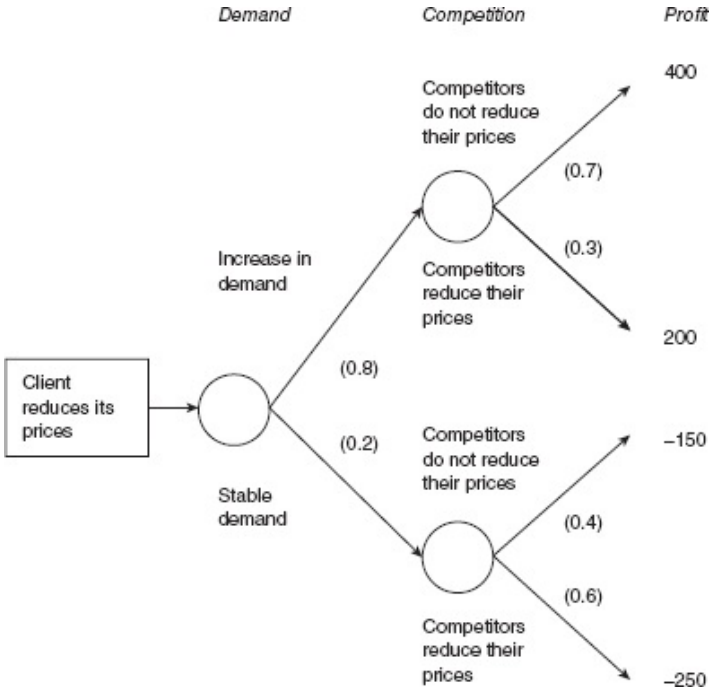

FIGURE 13.15 *A decision tree charts the uncertainties*
Note: The number between brackets indicates the probability of an event occurring.

Uncertainty and communication

When the consultants present their recommendation (the recommended solution), it should be clear to the client what the level of certainty is for this recommendation. For the client's decision making it is critical to know how certain it is that the recommended solution will generate the desired result. Consultants should therefore indicate the level of certainty of their recommendation. Consultants may use the so-called Harvey balls[1] to indicate that certainty (see Figure 13.17). For instance, the consultants may recommend to WAC to enter country X. The market for airplanes in that country seems attractive. However, country X has a high degree of corruption and

organized crime. These factors may undermine WAC's profit in that country and lower the level of certainty of the solution's result.

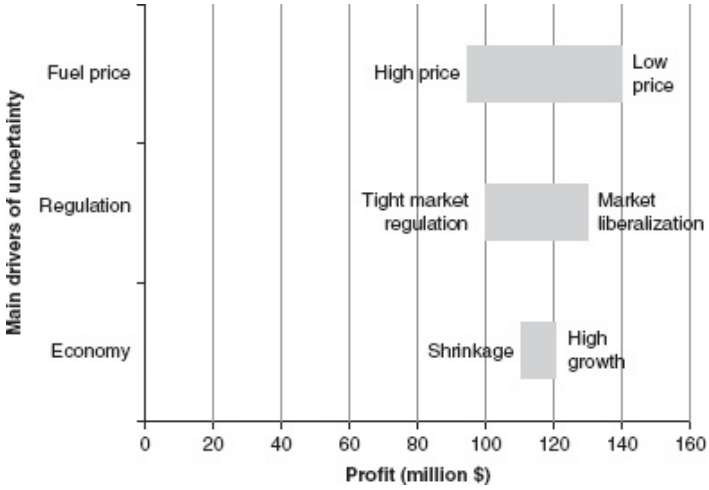

FIGURE 13.16 *A tornado diagram visualizes the sensitivity of solutions*

Solutions that deal with uncertainty

CONTINGENCY PLANNING Given the uncertainty about the effectiveness of their 'best' solution, what should consultants do? Consultants may consider several options to deal with uncertainty. First, they may develop multiple solutions for different futures. They may develop a (limited) number of scenarios. For different scenarios they may develop different solutions. They will recommend a solution for the most probable scenario. The other solutions are then back-ups. When (at a later stage) it becomes clear that an alternative scenario will emerge, then the client may switch to the alternative solution, which the consultants have developed for that particular scenario. This is contingency planning.

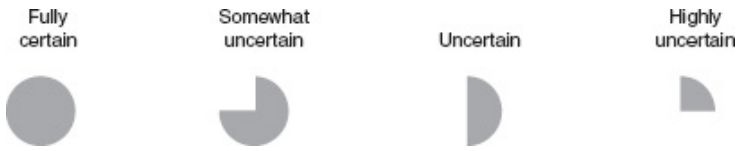

FIGURE 13.17 *Harvey balls indicating the degree of certainty*

HEDGING Second, the consultants may develop one solution that is robust enough to deliver acceptable results for the client under different scenarios. Of course there is a trade-off between results and the robustness of a solution. A 'specialist' solution that is fine-tuned to a specific scenario will outperform the generalist solution if that

particular scenario evolves. However, if an alternative scenario evolves then the generalist solution will still produce an acceptable result, while the specialist solution may fail completely. An example to increase robustness is hedging. For instance, for an airliner the fuel price is the main driver of uncertainty. The consultants may bet on a low fuel price and develop a recommendation that fits a low price scenario. However, the consultants may make their solution more robust by including hedging against price increases. Of course, such hedging costs money. However, it reduces the downward risk for the client. It is an insurance premium.

STAGE GATES Third, the consultants may manage the risk to the client by developing a solution that postpones commitment until uncertainty diminishes to an acceptable level. An example is the stage gate approach to innovation projects. Consultants may recommend to the client to invest in a new technology as it seems an attractive opportunity. However, the new technology is surrounded by high uncertainties. The consultants may recommend a limited initial investment in a first stage development of the technology. If the client successfully completes this stage, then the consultants will recommend that the client increases its commitment to the new technology. This increasing commitment means a larger investment in the next stage. However, if the stage is not successful, then the client can withdraw with relatively small costs incurred.

REAL OPTIONS Fourth, a variation on the postponement strategy is the real option. Consultants may advise the client to purchase a real option. For instance, the client faces a possible opportunity in a new technology or a new market. However, uncertainty is still high. Therefore, the client is reluctant to commit large resources in the early (and uncertain) stage. The client wants to wait and see what will happen: will the opportunity evolve or not? However, the client wants to avoid missing the boat. If it becomes clear that the opportunity will evolve, the client may be too late to seize the opportunity. The consultants may advise the client to purchase a real option, which is a right to play in the new game (of the opportunity). As an example of a real option, the client may purchase (an equity stake in) a company that is betting on the new opportunity. Alternatively, the client may set up a relatively small business unit that will bet on the opportunity. This unit is another real option. If the opportunity takes off, then the client may use its real option (its stake in the external company or its own business unit) as a launcher to scale up its commitment and seize the full benefits of the opportunity.

Evaluate solution options

Under uncertainty, the consultants may end up with multiple solutions. Each one of

these solutions has been analysed and accepted. The assumptions of these solutions have been accepted. But due to uncertainty, the consultants may not have been able to verify each assumption with facts. The effect of a solution may depend on some circumstances, which are uncertain. There may not be a single solution that outperforms the other solutions under all circumstances (scenarios). The relative performance of individual solutions varies with the circumstances. Take the example of the airplane manufacturer WAC. The consultants have identified three alternative solutions (X, Y, and Z). They use their financial model to calculate the profit of each solution under each of the four scenarios. Figure 13.18 visualizes the outcomes of these calculations.

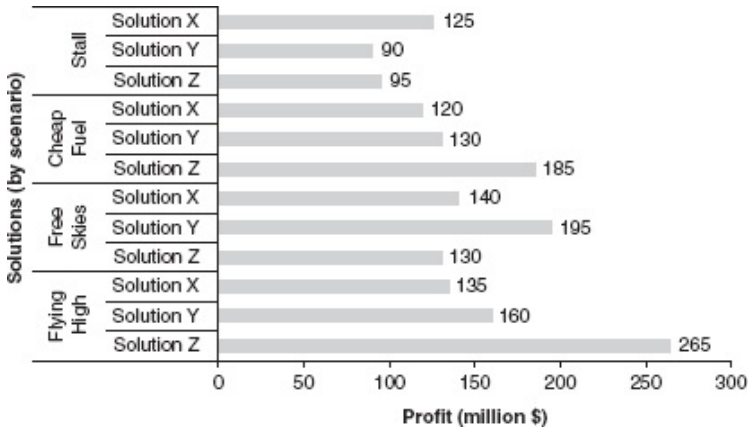

FIGURE 13.18 *Profit under different scenarios*

The consultants may attach a probability to each of the four scenarios. Based on these probabilities, the consultants may calculate the expected profit of each solution under the four scenarios (see Figure 13.19). The expected profit is the weighted average of the profits of that solution in the four scenarios. The probabilities determine the weights of the individual scenarios.

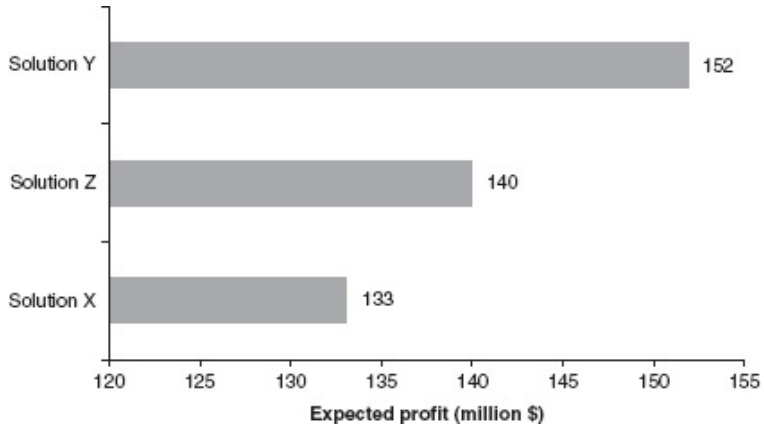

FIGURE 13.19 *The expected profit for alternative solutions*

MAKE DECISIONS ABOUT THE SOLUTION

Competing solutions

SINGLE BEST SOLUTION The consultants recommend the solution but the client decides on the solution. Regarding the recommendations to the client, we may distinguish two situations. First, the consultants have identified a single best solution. By this we mean that one solution outperforms any alternative solution on each one of the client's selection criteria (as specified upfront in the problem statement). In this situation it is easy for the consultants to make a recommendation because all of the client's criteria point in the same direction, meaning the same solution. If that solution satisfies all of the client's criteria in a superior way, then the decision for the client is also easy. The client should adopt the consultants' recommended solution.

NO CLEAR WINNER However, in the second situation the consultants have identified alternative solutions without a clear winner. There is no single solution that is always better than the others. Different solutions will win according to different criteria of the client. Even on a single criterion, different solutions may win in different scenarios (for instance, see Figure 13.18). In such situations, consultants may be better off refraining from recommending any single solution. Instead of making the selection for their client, the consultants should present alternative solutions to the client. In this situation, selecting a solution involves trade-offs between the advantages of individual solutions. Deciding on these trade-offs is the responsibility of the client. The consultants may only facilitate the client's decision making. They may do so by making the decision alternatives and the trade-offs as transparent as possible. Table 13.6 provides an example of what consultants may do. The consultants know upfront which criteria the client will use to select a solution. In fact, the consultants will have specified the client's decision criteria in the problem statement (see Chapter 12).

TABLE 13.6 *Evaluate alternative solutions*

	Contribution to result	Ease of implementation	Risk	Overall
Solution X	◗	●	◣	◗
Solution Y	●	◗	◗	◕
Solution Z	◕	◣	◗	◗

Note: The Harvey balls indicate the score for a solution on a criterion

EVALUATE SOLUTIONS Assume that the client has defined three decision criteria: contribution to result, ease of implementation, and risk. The ease of implementation refers to the complexity and the amount of work, and the required resources to execute the solution. Risk refers to the probability that the solution may not create the desired result. This risk has got to do with the probability that the client cannot implement the solution, as well as the probability that the client can implement the solution but the solution does not work. The consultants evaluate each solution on each criterion and subsequently calculate a weighted average (the overall score).

If the client prioritizes the solution's contribution to the result then the client should adopt solution Y. However, if ease of implementation is most important to the client, then they should choose solution X.

THE CONTRIBUTION OF THE SOLUTION Assume the client decides to adopt solution Y. Figure 13.20 on the next page visualizes how this solution contributes to the client's profit. After all, the solution is about closing the client's result gap. This figure shows what result the client will achieve when they implement the solution.

Non-competing solutions

MAP COMPLEMENTARY SOLUTIONS Not all solutions are alternatives, meaning that the client needs to choose between them: 'either A or C'. Some solutions are non-competing and may be combined: 'both B and C'. Sometimes the solutions will have to be combined to achieve the desired result (see Figure 13.22). For instance, no single solution is able to close the client's result gap. The client needs to combine several (non-competing) solutions to close the gap. Assume that the client has only two criteria for decision making about solutions: the contribution of the solution to the result and the ease of implementation of the solutions. Figure 13.21 provides a map for plotting the solutions. For instance, the client has a profit gap. The consultants have come up with several non-competing solutions to increase revenues (in the figure labelled as: 'Revenue increase #'). But they have also identified various non-competing solutions to reduce costs (labelled as: 'Cost reduction #').

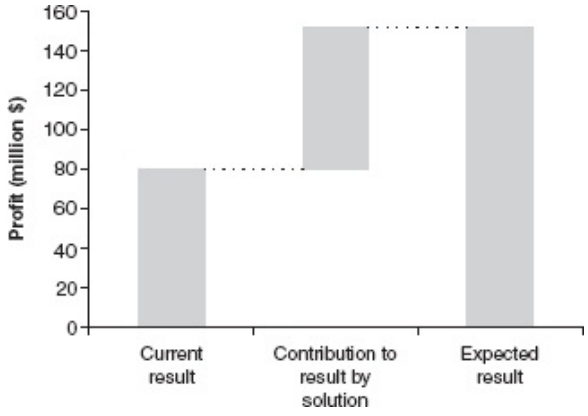

FIGURE 13.20 *The contribution to the result by the solution*

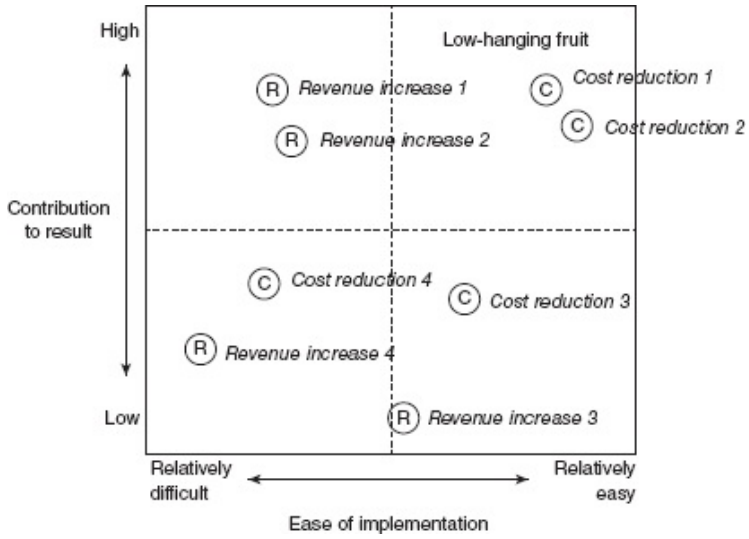

FIGURE 13.21 *Map of complementary solutions*

CHOOSE A SEQUENCE The consultants may divide the map into four quadrants. The top right quadrant represents the ‘low-hanging fruit solutions’: these solutions provide a relatively high contribution to the client’s result while they are relatively easy to implement. The client will probably focus first on the solutions in this quadrant. The bottom left quadrant contains the least attractive solutions because these promise a relatively low result contribution, while they are relatively difficult to implement. The solutions in this quadrant are the lowest priority for the client. Assume that the client selects five non-competing solutions: three solutions for a cost reduction (1, 2, and 3), and two solutions for a revenue increase (1 and 2). Figure 13.22 shows how these five non-competing solutions together will allow the client to close the result gap.

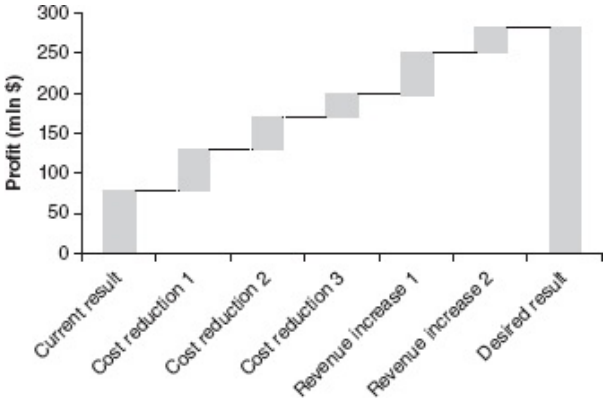

FIGURE 13.22 *Multiple complementary solutions to close the result gap*

PLAN FOR IMPLEMENTATION

Lower the level of abstraction

The client has adopted a solution. The solution prescribes how the client should close the result gap: 'If you do this, then you achieve that'. It promises a result improvement. The solution holds the potential for a result improvement. To realize this result improvement, the client needs to implement the solution. Implementation of the solution means actions. To achieve results, the actions should be concrete. Actions take place at the level of the individual actors inside or outside the client organization. However, the solution typically demands a high level of abstraction (for instance, the client should acquire a competitor with complementary competences to achieve the desired result). To realize the result, the individual actors need concrete instructions, which are actions defined at a low level of abstraction. The high-level solution therefore needs to be translated into low-level actions for individual actors.

Prepare for implementation

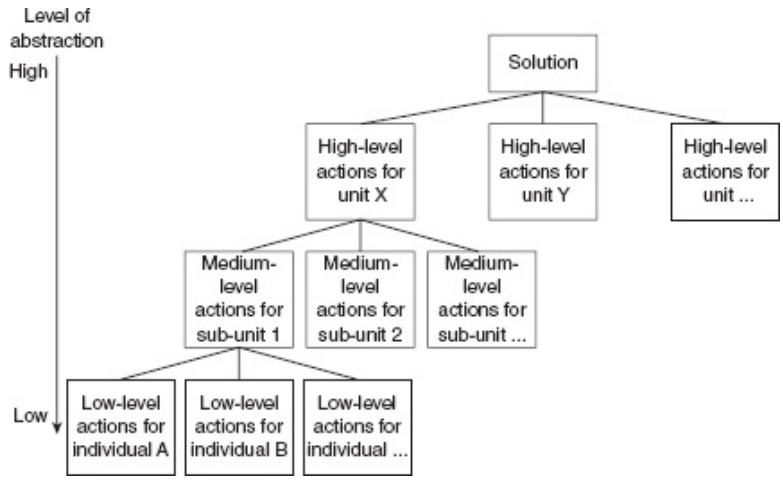

FIGURE 13.23 *Translate the solution into increasingly concrete actions*

Note: To keep this figure clear, it only shows the breakdown for unit X. However, in a complete action plan, the consultants break down the high-level actions for unit Y and Z to the level of actions for individual actors.

The consultants may increase their value to the client by making this translation. Implementation is a new project, after the problem solving project. The translation into actions is a work breakdown structure (see Chapter 11). The more hierarchical the client organization, the more translations to lower levels the consultants need to make. Figure 13.23 gives a stylized example. The client organization consists of a number of units. Each unit consists of sub-units. Each sub-unit consists of a number of individual actors. The consultants may first translate the solution to the level of the client's units. The consultants may break up the solution into high-level actions for each unit. Next, the consultants (together with the unit manager) may translate the high-level actions into lower-level actions for sub-units. Finally, the consultants translate the actions for sub-units into concrete actions for individual employees with these sub-units. As implementation is a project, the resources have to be allocated and a time plan needs to be made. Chapter 15 will elaborate on implementation.

SUMMARY

The structured solution development process consists of a series of steps (see Figure 13.24).

1. The consultants identify what are the key decisions that the client may take to solve the problem.
2. The consultants generate ideas for possible solutions to the problem based on these decisions. They develop a logical structure for these possible solutions.
3. They select the seemingly best solution from the structure of possible solutions.

This will become their initial hypothesis.

4. They identify and structure the assumptions of this hypothesis.
5. For each assumption, the consultants design and execute an analysis. If all assumptions are verified then the consultants have a solution.
6. If they have to reject one or more assumptions, then the consultants have to select another hypothesis from the structure of possible solutions. Hypothesis selection and testing can therefore be an iterative process.
7. The consultants break down the solution into actions to facilitate implementation.

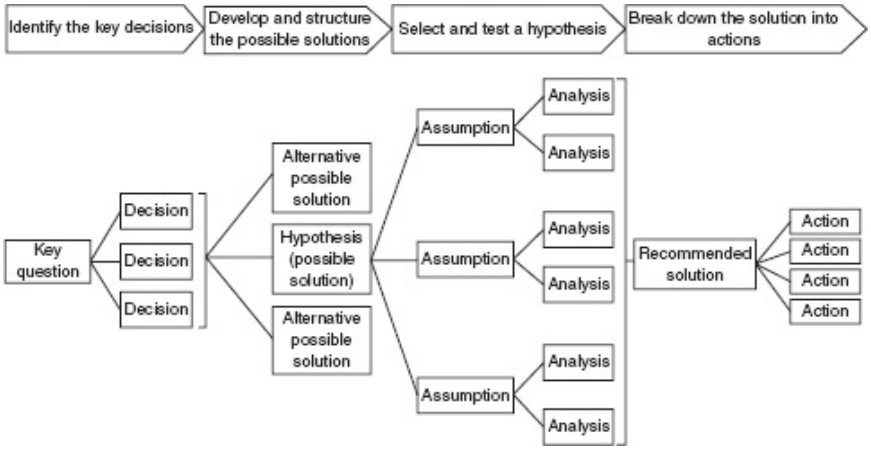

FIGURE 13.24 *The structured solution development process*

MINI CASE STUDY

Ivy Business School

The previous chapter illustrated how the consultants developed an opportunity statement for the Ivy Business School. They formulated the following key question: how should Ivy respond to the development of online learning technologies to reach a 5 per cent share of the global higher business education market within ten years?

Identify the decisions

What levers may the Ivy Business School pull? The consultants identify the decisions that Ivy may take to solve the problem. The consultants identify the key decision areas (see Table 13.7).

Develop possible solutions

The consultants identify what options Ivy has for each decision area. These options are the alternative decision outcomes.

TABLE 13.7 *Identify decision areas and alternative outcomes*

Decision area	Alternative decision outcomes
Target clients	• Tier 1 students • Tier 2 students
Timing of entry into online learning	• Enter now • Wait until online learning technologies meet requirements of tier 1 students.
Programmes for online learning	• All programmes • A selection of programmes
Value proposition for online learning	• Immersion (pure online or a blended offering of online and residential learning) • Selectivity (admission standards) • Certification and branding (same as residential or differentiated) • Knowledge (same content as residential or differentiated) • Tuition
Development and delivery infrastructure for online learning • Programme development • Online delivery platform • Network of satellite campuses (for blended offering)	• In-house • Outsourcing • Alliance

Structure possible solutions and select an initial hypothesis

The consultants explore the most probable solutions and put them in a structure (see Figure 13.25). Next, they select the best candidate solution to serve as their initial hypothesis. This hypothesis consists of four sub-hypotheses, existing at different levels of the structure (see the highlighted boxes in Figure 13.25).

Identify and structure the assumptions of the initial hypothesis

The consultants identify the assumptions for each sub-hypothesis. Table 13.8 presents the sub-hypotheses and their underlying assumptions.

Design the analyses of the assumptions

The consultants need to verify the assumptions underlying the hypothesis. As an

illustration, we focus on the following assumptions of the sub-hypothesis to target tier 2 students:

- Tier 2 students prefer top ranked school online learning over lower ranked school residential learning.
- Tier 1 students prefer top ranked school residential learning over top ranked school online learning.

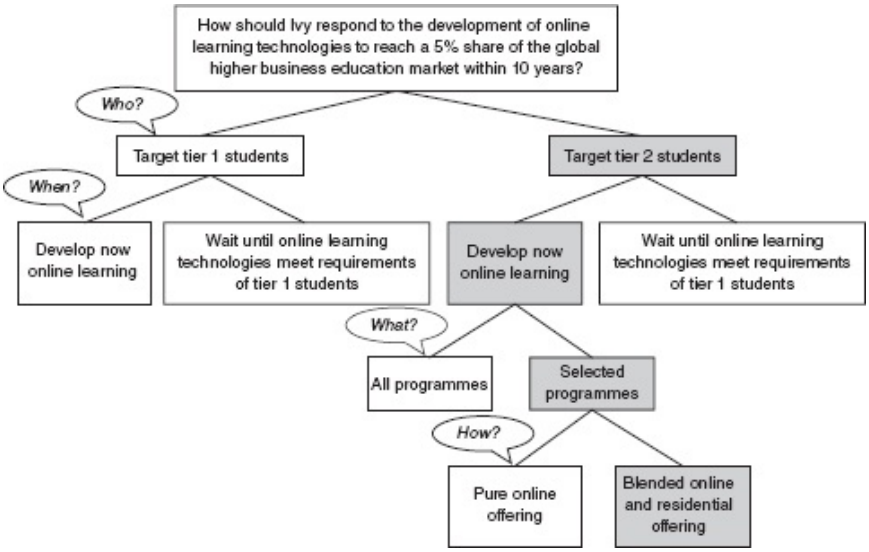

FIGURE 13.25 *Structure possible solutions and select the hypothesis*

TABLE 13.8 *Identify and structure the underlying assumptions*

Decision	Sub-hypothesis	Underlying assumptions
Who?	Target tier 2 students	• Tier 2 students prefer top ranked school online learning over lower ranked school residential learning. • Tier 1 students prefer top ranked school residential learning over top ranked school online learning.
When?	Develop now online learning	• Online learning disrupts lower ranked school residential learning now. • There are first mover advantages for top ranked schools. • Ivy has the resources and capabilities to develop online learning for tier 2 students: o Ivy Publishing has experience with marketing to tier 2 students. o Ivy Publishing has the resources and capabilities for product development. o Ivy Business School has sufficient financial reserves for investments in the development of online learning content and infrastructure.
What?	Selected programmes	• Online learning technologies do not (yet) meet the content requirements of all programmes. • Benefits of online learning vary across programmes.
How?	Blended online & residential offering	• Tier 2 students prefer blended over pure online offerings. • Blended offering enables Ivy to differentiate by using its core strength of immersion.

The consultants have to analyse the key drivers of the students' purchasing decision regarding higher business education. The consultants decide to conduct focus interviews and a survey to identify the key purchasing decision criteria for both tiers of students.

Next, the consultants decide to benchmark the Ivy residential offering against the Ivy blended offering and lower ranked schools' residential offerings. The consultants intend to use a survey for this benchmark.

The consultants develop a driver analysis of the purchasing decisions of tier 1 and tier 2 students. To identify the drivers, the consultants first do a round of focus interviews with students to develop an idea of the key purchasing decision criteria and their relative importance (weight in students' decision making). Subsequently, the consultants set up a survey to validate the interview results. Figure 13.26 presents the results of the research: the key purchasing criteria used by students. The weights that students attach to the individual criteria vary by tier of students.

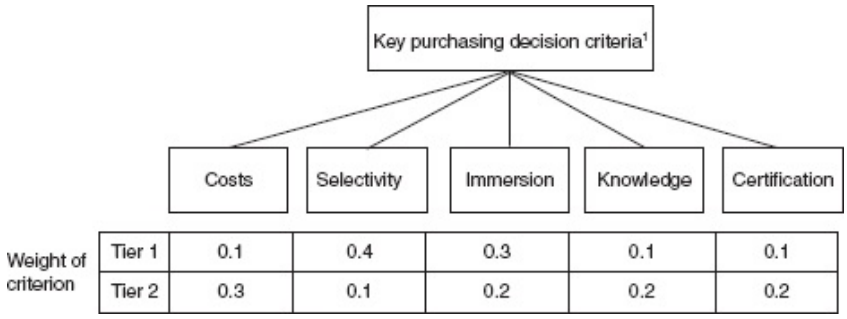

FIGURE 13.26 *Identify the drivers*

Note: (1) Costs are the author's addition. Other criteria are based on Laseter (2012). The weights of the criteria are fictitious numbers.

Analyse the assumptions

How does Ivy Blended compare with alternatives regarding the key purchasing decision criteria of tier 1 and tier 2 students? The consultants develop a benchmark analysis of these key purchasing decision criteria. They identify the relevant benchmark, which is a selection of schools, and use the survey to collect the data. The score per criterion ranges from 1 (lowest) to 5 (highest). Tables 13.9 and 13.10 show the results of the analysis.

TABLE 13.9 *Analyse the preferences of tier 1 students*

Tier 1 students		Unweighted score			Weighted score		
Criterion	Weight	Tier 2 school Residential	Ivy Blended	Ivy Residential	Tier 2 School Residential	Ivy Blended	Ivy Residential
Tuition (0.1)	0.1	5	3	1	0.5	0.3	0.1
Selectivity (0.4)	0.4	1	3	5	0.4	1.2	2
Immersion (0.3)	0.3	4	3	5	1.2	0.9	1.5
Knowledge (0.1)	0.1	2	4	5	0.2	0.4	0.5
Certification (0.1)	0.1	1	4	5	0.1	0.4	0.5
Total (1.0)	1				2.4	3.2	4.6

TABLE 13.10 *Analyse the preferences of tier 2 students*

Tier 2 students		Unweighted score			Weighted score		
Criterion	Weight	Tier 2 school Residential	Ivy Blended	Ivy Residential	Tier 2 School Residential	Ivy Blended	Ivy Residential
Tuition (0.3)	0.3	5	3	1	1.5	0.9	0.3
Selectivity (0.1)	0.1	1	3	5	0.1	0.3	0.5
Immersion (0.2)	0.2	4	3	5	0.8	0.6	1
Knowledge (0.2)	0.2	2	4	5	0.4	0.8	1
Certification (0.2)	0.2	1	4	5	0.2	0.8	1
Total (1.0)	1				3	3.4	3.8

Interpret the results of the analyses

The results of the analyses confirm the assumptions.

- All students prefer top ranked school residential learning over top ranked school online learning.
- All students prefer top ranked school online learning over lower ranked school residential learning.

Tier 1 students can afford top ranked school residential learning and will therefore not consider top ranked school online learning. In contrast, tier 2 students cannot afford top ranked school residential learning. Those tier 2 students who can afford top ranked school online learning will prefer this offering over lower ranked school residential learning.

Based on the results of the analyses, the consultants develop the output charts (see Figure 13.27) and present these charts to the steering committee.

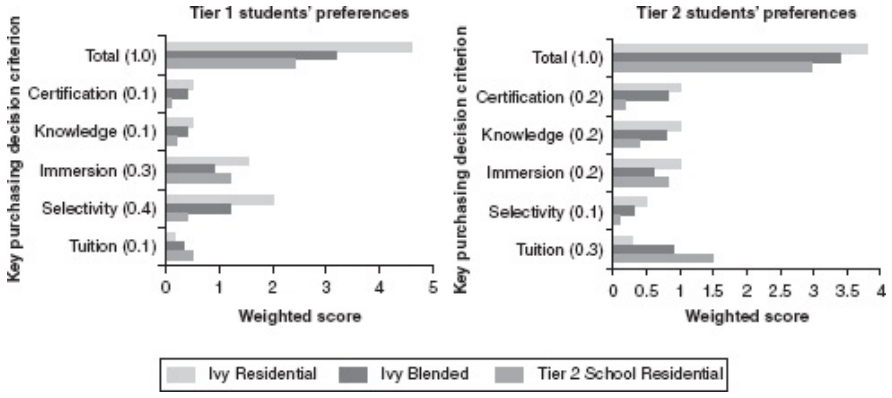

FIGURE 13.27 *The results of the analyses*

EXERCISES

1. The partners of Acme Consulting think that online consultancy may be an opportunity. Online consultancy is offering web-based services (diagnostic software, data sets, and advice), which clients may use to solve their problems (and seize opportunities). The firm has set up a task force to explore this opportunity. As a partner of Acme's taskforce you have to estimate how much revenue there is to be made with online consultancy worldwide in the coming five years. Design a two-level driver analysis for estimating this revenue opportunity. Each level should contain no more than seven drivers. The structure should be insightful, actionable, and MECE.
2. Assume the size of the online consultancy opportunity is $X billion. Acme wants to realize a 10 per cent share of this opportunity. Formulate the key question for Acme. Explain your answer.
3. What decisions may Acme take with regard to the online consultancy opportunity? Identify the key decision areas.
4. Building on the decision areas, formulate a hypothesis and create a structure of assumptions for this hypothesis (one level of assumptions, maximally seven).

REFLECTIVE QUESTIONS

1. Management consultants formulate and test hypotheses about possible solutions. How can management consultants develop higher quality hypotheses? Explain your answer.
2. Management consultants create draft presentations based on their initial hypothesis *before* they collect and analyse the data to test this hypothesis. Isn't this inefficient because they may have to reject their initial hypothesis? Why do they do this? Elaborate on your answer.
3. Management consultants strive for fact-based analysis to support their solution development. What should they do if the required data are not available? Explain your answer.

FURTHER READING

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[1]Named after Harvey Popel. He was a consultant with the consultancy firm Booz Allen & Hamilton. Popel introduced this use of the symbol in the 1970s.


BUSINESS LANDSCAPE
PROFIT
PRODUCTS
GEO
492
CEO
Would you be so kind as to show slide 427 once more?
Do you mean 427a or 427b?
Marc Bary