



INTRODUCTION

I recently overheard a conversation my twelve-year-old son, Martin, had with his friend Johanna while riding in the back seat of our car. In the midst of their chatter, he proudly announced, “My mom’s writing a book!”

“About what?” Johanna asked.

“Management consulting.”

Unimpressed, Johanna inquired, “What is *that*?”

To this, Martin confidently replied, “A management consultant is who you call when you’re in a tight spot.”

Leave it to Martin to sum up a multibillion dollar industry in one sentence. Martin got it partly wrong, however. This is not a book about management consulting. Rather, it’s about how to get out of a tight spot.

Managers face an endless stream of ambiguous problems and opportunities that they don’t have nearly enough time, resources, or process know-how to sort through and address. Although most of them are perfectly able to understand situations, solve problems, and seize opportunities, their techniques often are inefficient. Expert problem solvers, in contrast, are masters of process, and their process know-how—their ability to scope a project, conduct an analysis, develop airtight logic, and encourage creativity—is a large part of why they are expert. This is not to imply that your solutions should be of the cookie-cutter variety—quite the contrary. But if you do not have to revisit how to move forward every time you start a project, you can spend more time concentrating on the problem

or opportunity itself. *Designing Solutions for Your Business Problems* provides the process know-how, which will reduce the time and resources you will need.

This book is intended for people who are concerned with improving organizations. If you are a manager who wants to benefit from a creative and disciplined approach to problem solving, a consultant hoping to hone your skills, or thinking about becoming a management consultant, *Designing Solutions for Your Business Problems* can help you.

To say that this book is about solving problems is a vast oversimplification. The idea of a problem is inherently problematic: it focuses on what is wrong. A more fruitful and considerably more enjoyable approach to problem solving is to focus on what is possible or desirable—that is, to build on what is already good. When you look at any situation, it makes sense to view it from several angles, including examining what needs fixing and what can be built on. A solution does not necessarily have to solve a problem. The best way to stop smoking, for example, is never to start in the first place. The best way to strengthen an organization may not be to solve problems and fill gaps but rather to build on the base of capabilities it already has.

Solving problems and capitalizing on opportunities is hard. Those who need help worry that the problem solvers do not have a comprehensive understanding of the organization's context; perhaps they don't understand the business, the people, the customers, the competition. They worry that the problem solvers don't have enough experience to inform their recommendations. Problem solvers worry that those whom they are helping are not sufficiently involved, that they have been asked to solve the wrong problem, that those who need help don't understand the problem-solving process, and that they lack the know-how to move ahead once the problem solver has gone on to the next project. *Designing Solutions for Your Business Problems* helps you overcome these very real concerns.

While some problem solvers would have you believe that they have unique and superior approaches, at the process level, most expert problem solvers tackle issues and design solutions in roughly the same manner. They combine the best aspects of deductive and inductive reasoning.

Deductive reasoning is the process you use when you hypothesize the solution to a problem based on your previous experience, intuition, and the data to which you already have access. In order to find out whether you're right, you develop a series of tests or collect additional data to prove or disprove your initial point of view. The scientific method is derived from deductive reasoning.

Inductive reasoning is the process you use when you collect data in an effort to understand a situation and then sift through those data to infer "the answer." Creative problem-solving techniques rely heavily on inductive processes.

There are clear trade-offs between inductive and deductive approaches. Inductive problem solving is effective for developing a solid understanding of the situation. It has the potential to lead to new insights and is also more likely to result in broader systemic solutions. However, when using an inductive approach, you can easily stray into irrelevant investigations and waste a great deal of time. You may never reach closure.

The deductive approach is always efficient. You are much less likely to collect data you don't need, and you will usually arrive at a solution quickly. The downfall of the deductive approach is that outcomes may be self-fulfilling, and you may miss new insights.

Inductive and deductive problem solving both have strong proponents. Some people shy away from the concept of developing a hypothesis and testing it. They disparage planning in favor of celebrating emergence and muddling through and focus on the artistic and emotional aspects of human thought. They believe that deductive problem solving is inherently narrow and rigid. Other people focus exclusively on the most efficient approach. They don't want to waste time exploring options or considering implications; they just want to solve the problem as quickly as possible. Neither extreme position is tenable. An integration of inductive and deductive thinking, of ideas and analysis, and of emotion and cognition will usually result in superior performance. The process set out in this book integrates inductive and deductive thinking, ideas and analysis, and emotion and cognition. It enables you to address organizational problems and opportunities efficiently and creatively.

Designing Solutions for Your Business Problems describes the balance that is the key to success in problem solving: between speed and thoroughness, between creativity and practicality, between low cost and high quality. It explains how to achieve that balance: clarify intentions, reduce the time required for data collection, increase the validity of conclusions and decisions, and communicate more effectively.

The process is based on the premise that good solutions are designed; they aren't analyzed into existence, and they don't emerge on their own. By first developing a solid understanding of the organizational situation into which the solution must fit and keeping that understanding current throughout the problem-solving process, you ensure that the solution will work in the context of the organization in which it will be implemented. By making your logic transparent, you open your potential conclusions and solutions to legitimate debate based on facts and capabilities rather than intuition and politics. By considering and developing options rather than just presuming that a first hunch is the answer, you design the best possible solution.

Designing Solutions for Your Business Problems describes a rigorous, detailed, and very human process for solving unstructured business problems and responding to opportunities in a way that people can understand and organizations can implement. It will provide you with a set of tools and techniques to address the situations you face in a logical and coherent way.

The Results

Louis Gerstner's early and decisive actions as CEO of IBM demonstrate the power of the *Designing Solutions for Your Business Problems* approach.¹ Gerstner started his tenure in 1993 by visiting clients and employees out in the field and reading "thousands of pages of strategic documents" to enable him to understand the situation IBM was facing. Within a month, he developed a hypothesis about the wisdom of splitting the company into a federation of thirteen organizations, a move originally recommended by his predecessor, John Akers. The prevailing theory was that "as an integrated company IBM was not quick and nimble." Gerstner, a former IBM customer himself at American Express and Nabisco, hypothesized that customers might not be drawn to a federation as a model for IBM because the company was unique in its ability to help them solve complex technology problems across hardware platforms and software applications, as well as around the globe.

He tested this hypothesis with clients and "within 90 days of his arrival, Mr. Gerstner irrevocably decided to keep the company together" and to concentrate on integrated global solutions. He collected only the data that he needed to test his hypothesis rather than all the data available about the pluses and minuses of the federation model. Then he designed a solution that fit his conclusions and the capabilities of the organization: to "build this company from the customer back, not from the company out."

Al Morrison is a vice president with twenty-six years of experience at A. T. Kearney, a global management consulting organization. He believes that "the process really shines when you don't have time to do all the boil-the-ocean analyses. An 80 percent solution today is usually more valuable than a 100 percent solution next week."

He got a call one Super Bowl Sunday afternoon asking him to go to Chicago the next day to help an organization with a corporate restructuring. The solution had to be presented to the company's board of directors at the beginning of March. Clearly, there was no time to waste. When Morrison arrived on Monday morning, there were 2,500 employees at corporate headquarters. One month later, there were 280. How did he and his team do it?

Al's working hypothesis was that operating divisions could be more effective—more agile and cost efficient—if they had resources close to them. He answered only three questions to test his hypothesis:

1. What has to happen at corporate headquarters for strategic or governance reasons?
2. Which business units will take over the functions that do not have to be managed centrally?
3. What do we do with the employees who are not necessary at corporate headquarters and will not be reassigned to the business units?

If Morrison had conducted a typical analysis, it would have taken six months. He would have benchmarked other organizations, determined corporate and business unit needs, and conducted a current-state analysis to find out what each of the 2,500 people was doing. It would have taken sixty days just to design the questions, collect the data, and enter the details of the current state into a database. It would have been an interesting exercise, but it was unnecessary to help this organization.

Lori Bremer, a vice president at American Express, has more than eighteen years of problem-solving experience. She is responsible for charge card product strategy and new product development in international markets. She finds that the process described in this book gives focus and direction to all the assignments she undertakes. When I last spoke with her, she was conducting an international product line strategy and said to me, “When you follow the process formally, it's time-consuming. It seems easier to shoot from the hip. Longer term, however, you're less efficient because you often have to rework. . . . We're often criticized for being too process-oriented, but without hypotheses and a plan we'd have anarchy. . . . I have taken my teams through the process and consistently, they find it extremely useful and valuable. It should be part of the basic training curriculum for the corporation. It gives people who are smart and analytical a process to follow. It helps them stay organized.”

Until a recent promotion, Hans-Ulrich Mayer was responsible for internal consulting at Nestlé. One of the projects his team worked on was a major rationalization in Asia: ten factories, ten markets, and ten products. He found that the process described in this book helped bring his team together. People from many varied backgrounds and twenty nationalities all developed a common vocabulary and approach to the problem. Mayer told me that they had “improved their productivity in a major way. A more complicated project needs more structure and this process provided it.”

It took Mayer quite a while to convince people to learn how to design solutions. As an internal consultant focusing on industrial strategies, he was

responsible for deciding where and when to open and close factories. Most members of his group were high performers within the organization with at least five years of industry experience, often in Nestlé's operating companies. Most were also implementers at heart and had a natural suspicion of methodology. They thought it would add unnecessary bureaucracy without sufficient benefit. Mayer made them try it.

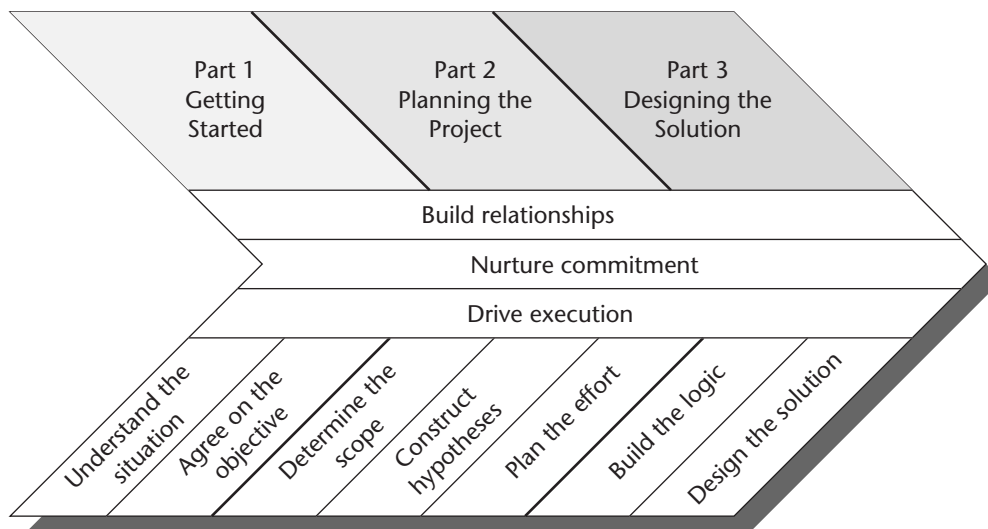
Hans-Ulrich has now completed eighty projects using the process set out in this book. Without the process, he feels he would not have been as successful as he has been—a success that is corroborated by his career progression.

Kenneth Lay worked for IBM for twenty-seven years and is a senior vice president at JP Morgan Chase. He learned about structured problem solving when he was at IBM and has used it ever since. He finds that the greatest challenge in the approach is convincing others that process, structure, and discipline are the best way to solve problems. "The use of this process ought to be intuitive, but for lots of people, it isn't. Its benefit comes from the discipline it forces on the problem solvers."

The Details

Designing Solutions for Your Business Problems is divided into three parts that follow the path of a typical project (see Figure I.1). In addition to the process steps, you must build relationships, nurture commitment, and drive execution throughout a

FIGURE I.1 PROCESS DETAILS.



project. Chapters about each of these subjects are interspersed among the process chapters. Each part ends with suggestions for trying out the tools and approaches explored in the part.

Part One: Getting Started

Often the most demanding aspect of solving a problem or investigating an opportunity is understanding the environment in which the solution must work and the organizational constraints imposed upon it. It is a very rare problem or opportunity that isn't subject to a challenging environment. Good problem solvers not only try to think outside the box; they begin by understanding the box better. Chapter One provides you with tools to help you consider the situation you are facing as an integrated whole at the outset of a project rather than a series of impediments you encounter throughout.

Chapter Two explores why specific objectives are much more likely to be effective than vague statements of purpose. The objective is the desired result, not the activities to be undertaken. For example, developing a strategy is not an objective. Developing a strategy in order to improve performance by 10 percent during the next year is. In addition, an objective has to be the aim of the person for whom the project is being undertaken, not the person who is doing the work (unless, of course, you are your own client).

The beginning of a problem-solving project is often a stressful time for all the participants. People may not know each other very well, expectations may be unclear, and ground rules for how individuals will work together have not been set. To make the situation even more challenging, the process by which people sort through these issues may determine the tenor of their relationships. Chapter Three identifies the important elements of communication during the early stages of a project and how you can build relationships to sustain you and the group through the challenging times ahead.

Part Two: Planning the Project

Even with a clear objective, there is often a great deal of debate concerning the scope of a project. You have to quickly define and reach consensus about the areas that will be investigated and those that will remain off limits. By applying an understanding of the limitations of human attention and the need to be mutually exclusive and collectively exhaustive, you will find the appropriate balance between inclusiveness and achievability. Chapter Four develops a solid framework to use in the battle against scope creep throughout the duration of the project.

There are a lot more data about any problem or opportunity than you will ever have time to collect and analyze. The sooner you can determine what is relevant, the sooner you will reach a conclusion and be able to implement a solution. Hypotheses organize and limit data collection to that which is most likely to be important and useful. Chapter Five explains the most practical way to decide which data to collect and shows you how to use such information to maximize the benefit of your efforts.

Once you have developed the hypotheses you will use to drive data collection, you can develop a detailed plan of the problem-solving effort. Chapter Six demonstrates how to use planning tools and techniques effectively and connect them to the rest of the problem-solving process.

When solving a problem, you have to start from where the organization is starting, not from where you are or where you would like the organization to end up. You have to go back to your understanding of the situation and its constraints. Coercion and begging do not work. It is important to remember that what people say may not be what they think. Often “yes” means, “I’m tired of all this,” and “no” means, “I’m not up to the risk or effort.” You must provide understanding and motivation; commitment and action are up to the doers. Chapter Seven describes how to get commitment from key stakeholders and explores the challenges and opportunities associated with bringing people along during the problem-solving process. It also provides advice on structuring communications whose main purpose is learning rather than informing or selling.

Part Three: Designing the Solution

Once you begin collecting data, you also begin developing opinions about what the organization should do. These opinions start to give you a sense of your conclusions about the problem or opportunity, which helps to lead you to decisions and probable solutions. The challenge in all of this is keeping everything straight. Which hypotheses should you accept? Which ones should you reject? Which ones require you to gather more data? Which data are useful? Which are trustworthy? Why are there inconsistencies? Do they matter? You need to move from a morass of inconsistent and unclear data to a set of clear and logically consistent conclusions that lead to innovative and practical solutions. But how should you do this?

Chapter Eight explains the logic diagram, the core of the problem-solving process. A logic diagram shows the connections among the data you gather, the findings you deduce from the data, the conclusions you reach based on the findings, and the solution you recommend based on your conclusions. It allows you to test quickly whether the argument you hope to use to convince others to act is

both complete and consistent. Each component can be tested by itself, but it is testing the whole that enables you to determine whether you are really making any sense.

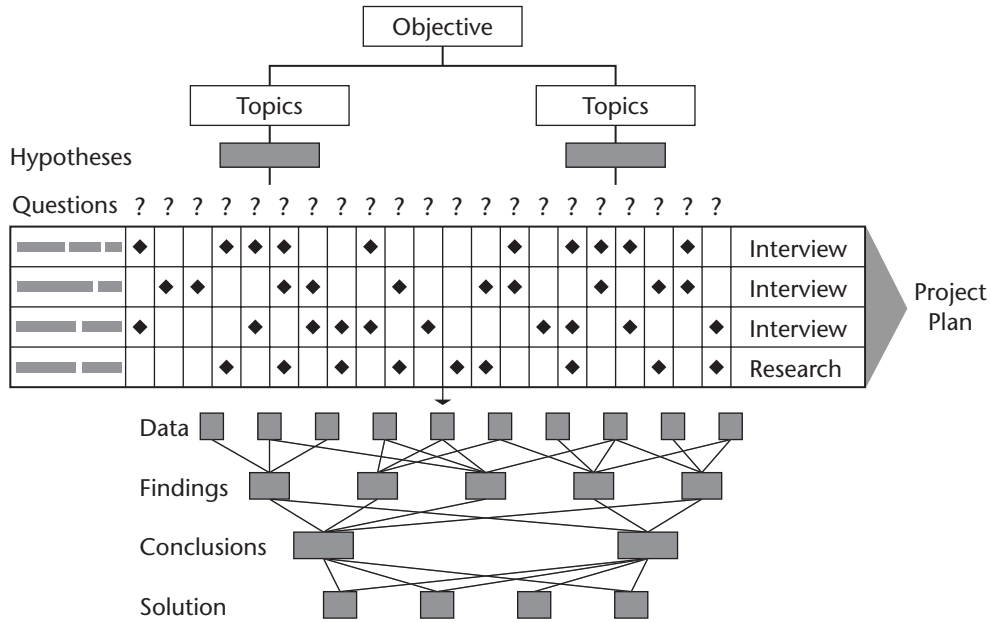
Your first idea is rarely your best. Often, people have the mistaken notion that they should go with their first hunches. The reality is that a first idea to solve a problem has nothing more going for it than the fact that it was the first idea. It is no better than a first draft. Taking the time to consider other options will usually lead to the best solution. But thinking of alternatives once there is an answer available frequently seems like a waste of time. You may be tempted to come up with nothing but straw men once you have developed a solution you are comfortable with. Chapter Nine helps you quickly devise plausible options and then select among them based not only on their elegance, but also on the will and the ability of the organization to implement them.

No matter how involved people are in the development of the solution and how committed they are to its implementation, there is no guarantee that they will follow through and do something. In order to execute, people need to know what to do, why they should do it, and how they should proceed. The solution provides the *what*. Chapter Ten describes *how* to put together a justification that will be understood long after the people who created it have moved on, as well as how to develop an action plan that enables people to implement the solution you recommend.

Appendix A describes how to map organizational processes and the analyses you can undertake to help you understand and assess them. Appendix B describes how to plan, prepare for, conduct, and record data collection interviews. The CD-ROM accompanying *Designing Solutions for Your Business Problems* contains a case study, a process checklist, and copies of the forms and templates found throughout the book. The case study will give you an opportunity to practice the process and compare your solution to the one provided. The process checklist will help you stay organized as you conduct projects, and the forms and templates provide a starting point for documenting your progress.

Designing Solutions for Your Business Problems will introduce you to the steps to manage the problem-solving process. You will begin by understanding the situation and your needs or the needs of your boss or your client. Then you will define the objectives of the project, and determine its scope. You will work with the project's scope to develop hypotheses and the questions to test them. Then you will create a matrix of the data sources you will tap to answer your questions. The matrix, in turn, leads to your project plan. When you have collected the data, you will develop a logic diagram that shows how you have synthesized the data into findings and how the findings have enabled you to draw conclusions. Your conclusions lead to your solution and action plan. While undertaking these steps, you also need

FIGURE I.2. DESIGNING SOLUTIONS TOOL KIT.



to keep focused on building relationships, nurturing commitment, and driving execution. Over the course of the book, the diagram in Figure I.2 will be constructed piece by piece. You can use it to keep track of your progress.

The real world isn't linear, and it is unlikely that you will ever have a project that will enable you to follow each step one after another without skipping around and backtracking. Your challenge will be to determine how to use the tools and the process effectively to support your problem solving without becoming a slave to them.