

CHAPTER 1

Introduction

This first chapter provides guidance about the opportunities of customer analytics, given the strategic objectives and the maturity of the information systems in your organization. It also introduces the basic terms used in the rest of this book, including the term “customer analytics,” and how it deviates from terms such as “business intelligence” (BI) and “customer intelligence.” Like business intelligence and business analytics (BA), however, customer analytics is part of the same discipline called information management, a term that also is investigated further.

This chapter also discusses different types of information, which are grouped from a process perspective. There is also a section introducing process management. Finally, the chapter discusses what segmentation is, including the strengths and weaknesses of segmentation based on input from data warehouse (DW), questionnaire, and subject matter experts.

DEFINITION OF CENTRAL CONCEPTS USED IN THIS BOOK

In my previous book, *Business Analytics for Managers: Taking Business Intelligence beyond Reporting*,¹ I defined “business analytics” as:

Delivering the right decision support to the right people at the right time.

This definition points out some key points to those working with BI (decision support based on simple reports) or BA (decision support based on complex analytical skills) for the first time:

- The purpose of all the data, technical expressions, servers, architectural strategies, master data management, and so on is to create decision support—that is all. The value from a DW is enabled via increased organization-wide ability to make better decisions.
- The creation of decision support based on electronically stored data involves various technical departments, analysts, and end users spread around the organization. Some clear processes must be in place for the organization to reap the full benefits of its BI investment.

Business intelligence has the potential to provide decision support to all of the functions in an organization. Using BI, the human resources department can learn which individuals in an organization are high performers and then hire, train, and reward other employees to become similar high performers. BI enables inventory managers to minimize the amount of capital in stored goods while being able to deliver what is needed. Production can minimize its costs by setting up activity-based costing programs, and so on.

The purpose for all the functions mentioned is: to optimize performance within the area for which they are responsible. The same is the case with customer analytics; it is decision support with the overall purpose of optimizing the lifetime of your customer base. Hence we define customer analytics as:

Delivering customer-centric decision support to the right people at the right time.

Typically, three types of decision makers in an organization are involved in customer analytics, developing a company strategy, a marketing strategy, and an operational-level strategy:

1. **Strategic decision makers.** These are the individuals who make the overall company strategy. To do so, they need

customer-centric information to make the best possible plan for how to run the company in the future. They also need information about whether the overall strategy is being executed successfully or whether corrective action needs to be taken.

2. **Sales and marketing decision makers.** These are the individuals who make the sales and the customer relationship management (CRM) strategy. The sales strategy deals with getting new customers, and the CRM strategy deals with handling the existing customer base. Just like the strategic decision makers, they need information to create business activities and to monitor their execution. The difference is the level of details: The sales and marketing department wants the information on a short-term, campaign/market activity level; the strategy team typically requires information on an overall level, to spot trends and long-term business opportunities.
3. **Operation decision makers.** These are the people who implement the campaigns and market activities, typically in sales and call centers. The decision support they require is in terms of whom to call, when and what to offer, or what to say in order to retain dissatisfied customers. These decision makers are the users of operational information, which could include call lists and pop-ups when customers call in, along with performance management reports.

There is, however, one very important distinction between the BA/BI and customer analytics/customer intelligence that has to do with the process value chain. The BI/BA process is fed, more or less exclusively, by DW data. My earlier book on BA showed the various kinds of decision support that is enabled via a DW and how this process should be managed. This book has less to do with where the data are coming from and more to do with how you can make the right customer-centric decisions. Therefore, the focus is not on whether the data are sourced from a DW, questionnaire data, or the insights gained from subject matter experts, as long as the decision support is customer-centric and some analytics are used in the process. The various data and knowledge sources should not be seen as competing sources but rather as supplementary elements that generate significant synergies.

As you learn in this book, the synergies vary, depending on the maturity of your processes, the degree of existing customer understanding in your organization, and the quality of the various data sources.

MORE THAN JUST TECHNICAL SOLUTIONS

As mentioned earlier, if you only see customer analytics and BI as technical solutions, you will fail, since they are about helping people make better decisions. Once I was part of an implementation of a customer scorecard (a tool that lists what the company had delivered to customers, including whether it was meeting service-level agreements). We learned that even though it is obvious that the sales staff should use such a tool in order to conduct fact-based negotiations with their counterparts, only one-third of them used it. Some did not know about this new tool; others preferred to do it the old way even though the new method provided a wide-range of process improvements to customers. Of the one-third who used the scorecard, we estimated that they got only one-third of the potential value out of it because they did not apply that information in an optimal way. In other words, if you see customer analytics or any other information system as only a technical discipline, you will realize only a fraction of its potential value—just the tip of the iceberg.

The obvious shortcoming was that the makers of the scorecard had implemented only a technical solution, since they did not consider business processes and the users. The change management element was missing.

We mentioned earlier that there are three types of decision makers. Since the one-third of the one-third rule does not apply to them all, we will go through them one by one.

- **Strategic decision makers.** As mentioned earlier, they basically do two things: They make strategies and follow up on them. When you make strategy, you focus on two things: leveraging short-term issues and seeking to gain long-term competitive advantages. Research has shown that most organizations do not understand the full potential of information, including customer analytics, during the strategy-making process. One reason

for this could be that most chief information officers do not have an analytical and strategic background.

- **Sales and marketing decision makers.** If the person responsible for making the sales and CRM strategy is not aware of the potential of customer analytics, how can they be expected to opt for it? This is also why we have made this book a menu that shows the relationship between some universal key performance indicators and individual methodologies. At the same time, the analyst has to be able to deliver. That is what we call the recipe, which contains input about what information and knowledge should be delivered before a new business activity is started and how to monitor it.
- **Operation decision makers.** As mentioned, you cannot just make some pop-up window in a call center and expect to realize the full effect of whatever intentions were behind it. If you want the full effect of an information system, you must go through three steps during the implementation phase:
 1. **Make process maps that clearly define how you wish people to work.** For example, when a customer calls in, what do you want staff to say in order to clarify the customer requirements? If you do not already have a clear idea about how to identify what the customer wants, then go out and find some best practices. The use of best practices also means that you already have identified a process improvement at this early step.
 2. **Design a technical system that supports this best practice.** For example, when people call in, a pop-up with relevant customer details is shown, so that the agent does not have to ask the customer about what you as a company already know. If the customer issue is resolved positively, a pop-up informing the call center agent about potential cross-selling opportunities could occur. A bonus system rewarding call center agents for their selling efforts (and ability to solve issues) also could be established.
 3. **Train the call center agents to follow the new procedures that you wish to implement, including the**

technical solution and the bonus system. The process and training elements are also known as change management elements; they are ways to lead people into following new ways of working and keeping them doing so after you have left the building.

WHAT IS AN INFORMATION STRATEGY?

In this section we take a closer look at what an information strategy is in order to make the link between the company strategy and what decision support has to be produced. We also introduce different kinds of information, based on which kind of decision support this information is made to support. Finally, this section also gives insights on why so many customer analytics projects that are driven by the DW fail. Since customer analytics often sources its data from one or more DWs, this section is explicitly from a BI perspective. As you will learn, BI based on DW data is a very complex process, and there are important lessons to be learned.

First of all, we take a closer look at what an information strategy is. In the simplest form, an information strategy can be described as a list of all the knowledge and information that is required in order for a business strategy to be successful, including a plan of how to create this decision support or operational data. Adding a little complexity to this definition, an information strategy consists of three domains that have to be managed and aligned in order to use DW information successfully:

1. **Business requirements.** Without clear business requirements on the overall objectives of your company strategy or marketing plan, over time your business activities will end up as a patchwork based on what you used to do with no clear strategic direction. After all, there is no point in making a plan that has no purpose, so the first requirement is clear objectives.
2. **Analytical competencies.** Without knowing which analytical competencies are available and needed at certain times, you will end up continuously reusing the same analytical skills you have always used, which is the same as degenerating your

decision support. As they say, if you have a hammer in the hand, everything looks like a nail. Therefore, you need a full analytical tool box and the knowledge of how to use it. This is business critical in the information age where “survival of the smartest” is the winning and constantly changing formula.

3. **Data foundation.** Customer analytics, like all other types of BI, is based on making the most out of data stored in different data repositories. If for various reasons you cannot get access to data or understand, trust, and manipulate the data you are receiving, your analytical efforts all stop here. In other words, you should work together with the DW team and the technical side of the organization, but in case of conflicts you have to make it clear to them that the technical side of the organization is there to support the commercial. It can never be the other way around.

If this is all there is to it, then why do 50% to 70% of all customer analytics projects fail or end up being challenged because they do not deliver the expected returns? Why is it that if you start a new customer analytics activity with an average customer analytics team, you should expect to fail? Many reasons for this primarily have to do with the fact that these are cross-functional activities that require top specialist skills from everyone in the process. Therefore, even if only one individual, step, or function in the process fails, the whole process will fail. In my previous book, *Business Analytics for Managers* (www.basm-support.com), I explained this process in great detail. In this section, I just present the overall model, the information wheel (see Exhibit 1.1).

The information wheel shows that information management starts with a business strategy: Strategy is king. Based on the overall business strategy, each of the functions (human resources, sales, finance, etc.) will make its own functional strategies in alignment with each other to deliver the functional specific objectives (e.g., to reduce employee turnover to 5% per year, increase sales by 20%, or minimize outstanding to 14 days in average). Because this book is about customer analytics, we focus only on the sales and marketing strategies. In general, their objectives can be described as optimizing customer

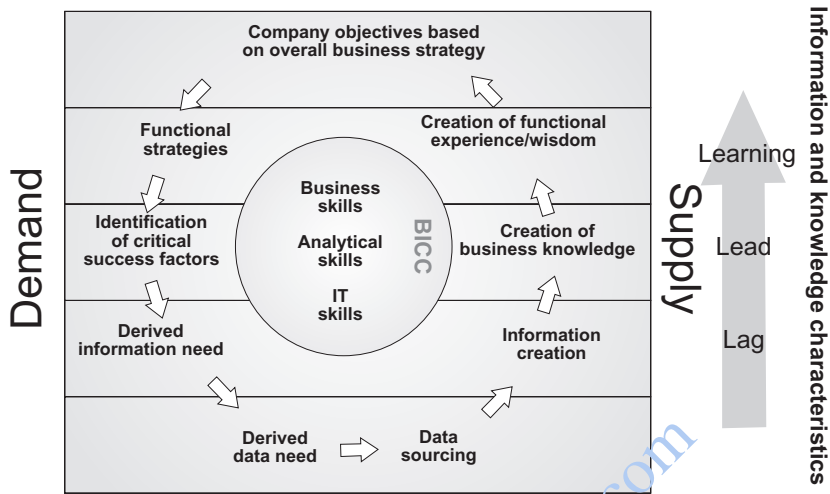


Exhibit 1.1 Information Wheel from an Organizational Perspective

acquisitions processes, cross-selling and up-selling processes, and retention processes. In other words, their aim is to get, to increase, and to keep customers.

Sales and marketing processes are very often referred to as CRM processes because, overall, this is what they are about: managing how we treat our customers. In many organizations, the sales process is separated out into a sales department for various reasons. From a process perspective, however, the sales and the CRM department are closely linked. This is because if the sales department acquires disloyal and low-spending customers, the CRM department will be set up for failure, with its members spending their time trying to cultivate customers with a low preference for the company, brand, service, or product, or low spending.

For both the sales and the CRM strategy or all major activities, strategy creators identify the critical success factors (usually about four to six factors). All of these factors must go correctly in order for the strategy to be successful as a whole. For example, imagine a marketing department strategic objective that states that the customer base should be increased by 5% at the end of the year. The marketing department now has the option of acquiring more customers or

retaining more customers. Either way or a combination of the two ways will meet the objective.

If the CRM department chooses to embark on a pure retention strategy, to be successful, it is critical that it launches the right activities, toward the right customers, with the right retention offers, at the right time. Also, the CRM department will require some performance statistics to evaluate the campaigns continuously and to what degree they are meeting their overall strategic objectives.

We have now defined the critical success factors, which in turn define the derived information need, which can be formulated to analysts in this way: Tell us which customers will leave us, when, and why. Then the business must figure out what to do about it (i.e., develop the retention offers). The business also would like to get data that indicates how well the activities perform on a winning basis.

Based on the derived information need, business analysts will start searching for data that can provide input to their data-mining models and statistical efforts. Perhaps the data already exist; alternatively, they will have to be sourced in the future or perhaps the company will have to continue without it.

When this is done, the analysts create the data. This needed information can be:

- **Lead information.** Information used for innovating new processes (before your new campaigns).
- **Lag information.** Performance data used for monitoring the performance of the existing processes (used during the campaign execution phase).
- **Learning information.** Feedback to the strategy function and other parallel sales departments allowing them to see new opportunities and threats based on the overall learning from the historical marketing activities (created after a campaign).

As can be seen, creation of the needed information and knowledge is a complex process where there is no room for mistakes. Most business analysts are specialists (although sometimes they may lack skills or simply be generalists in disguise), and typically no process owner is in place. In some organizations, BI competence centers formalize

some of the contacts; however, most organizations rely on the generalist skills of project managers to make all ends meet.

In addition, the change management program of training the call centers must be undertaken. Agents must be trained in outbound calls or receiving campaign replies, and internal procedures must be in place. Potentially, technical solutions may have to be in place before kickoff, and external partners may have to perform in alignment.

Due to their complexity, it is no wonder that customer analytics activities typically fail. In fact, one might wonder why things occasionally go well. It is important to understand that customer analytics activities that are partly or fully based on DW data are a complex endeavor since they require specialist skills and you will rely on many other functions in the organization. For these reasons your analysts should have business, analytical, and data skills, plus people and project skills. A limited number of these people are available, and they are hard to keep, but if you do: They are worth their salaries.

REVOLUTIONARY VERSUS EVOLUTIONARY PROCESS CHANGES

This section adds a process perspective on how to make customer analytics, in order to explain the different kinds of information, such as lead, lag, and learning information. In this context, we define a process as a series of coordinated actions with a common goal in mind. The goal could be to sell a pair of shoes to a customer, and the process could be to pull a list of customers who have not purchased any shoes from our Web site lately, identify which kinds of shoes that each would be most likely to buy, and then send the offer to the customer by email.

If you are the process owner, there are two ways you can improve this process: through evolutionary or revolutionary changes. The corresponding information types and the way that you typically work with them can be divided into two categories: lead and lag information. The two ways of optimizing a process are:

1. **Evolutionary business process changes have to do with optimizing already existing processes within their existing framework.** Typically these changes are triggered by the

people who operate them based on such information as control charts and reports, which document the historical performance of the process in play, or simply by clever and engaged employees.

2. **Revolutionary business changes have to do with reconfiguring a process by abandoning existing ones or developing new ones where needed.** Typically these changes are triggered by the functional strategy team because the existing processes are no longer up to market standards or because the organizational strategy has changed, which of course is reflected in how things are done: the processes. The information required for revolutionary business changes typically is derived via the use of analytical procedures and techniques.

In other words, a process performs in an acceptable way according to market standards and business ambition. Hence we will monitor it via reports and the like. Alternatively, we find that the process (e.g., the way we sell or what we sell) does not live up to market standards, and we need to generate knowledge about what customers want and need. This information can come from many places, such as subject matter experts, questionnaires, or DW data. This process perspective is outlined in Exhibit 1.2, where the flat line depicts ever-increasing market standards that continuously require the organization to

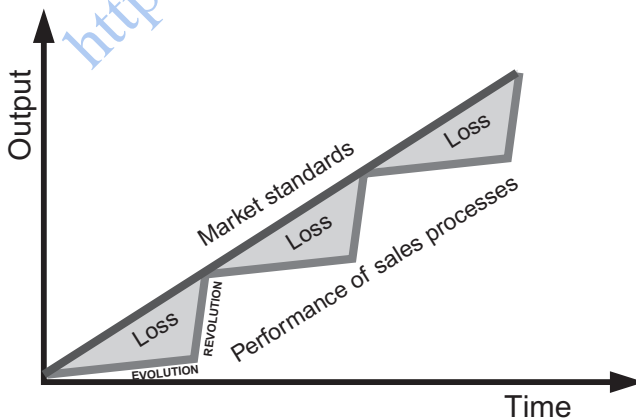


Exhibit 1.2 Stairway Model Illustrating One Process

produce at lower costs and create offers that give higher user satisfaction.

The lower zigzag line represents the nature of a typical business process or product that has to satisfy ever-increasing market demands. The zigzag shape is a result of the nature of processes. When processes are implemented, they typically do live up to the market requirements; however, they do not improve with the speed of the market. Typically the same product will come in new versions, which would be evolutionary change, but at some point in time the product simply does not live up to market standards and new product lines must replace the old ones. The way we optimally price things changes over time, the optimal customer service changes, the optimal way of branding changes; the same is true with our commercials, the way we get customers, and the way we keep our customers: The requirements all change over time. Sometimes evolutionary versions will do, but sometimes nothing less than new innovative products and services are needed.

For example, try to imagine a society where there is no innovation because all of the inhabitants do not like risk taking, innovation, or new ideas, or simply are so focused on getting their daily bread that they do not have time to think beyond what they do today. What you would get is a society where everyone would ride in horse carts instead of automobiles; however, no doubt, they would use the horses in the most efficient manner. The problem is that all you have done is change an inefficient process and turn it into to an optimized inefficient process. You also often see this in high-performance organizations with mediocre management. People have to run faster and faster in order to keep up with the competition simply because they did not work smarter—they do not innovate. This method will work for a while, but only for a while. This model also illustrates this via the “loss” areas, which show the consequences of the specific process not being up to date. The loss is generated via an inefficient process that is too costly or missed market potential because the process does not satisfy the customer needs in one way or another.

All the sales and marketing processes for a company also could be illustrated by a line rather than steps, where the line shows the average distance of all the marketing processes from the market

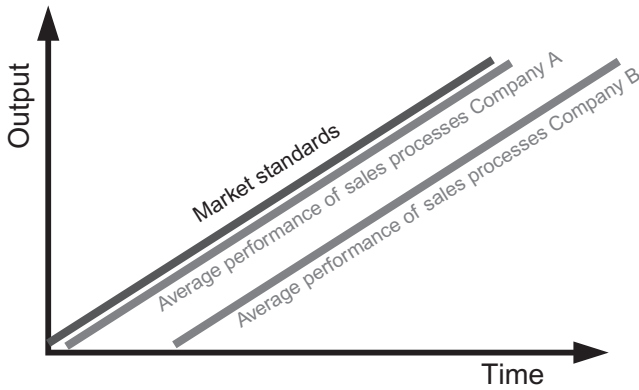


Exhibit 1.3 Stairway Model Illustrating the Averages of Many Processes

standard. The farther the line is away from the market standards, the less competitive the company will be. Such a scenario is illustrated in Exhibit 1.3, which shows a situation in which company A is more competitive than company B.

From this graph, we can conclude that, in order to remain competitive, a company has to configure its process landscape (in this example sales and marketing processes) according to market needs. The big question is how to do this. From an information management perspective, the answer is by continuously generating lead information that can revolutionize your processes when needed and by continuously generating lag information that allows you to monitor and optimize your existing processes between the revolutionary changes. You also have to keep in mind that innovation does not stop at the point where the product meets market standards. Innovation can set new market standards. If these new market standards are a result of your analytical processes, among others, then you are competing on analytics.

Therefore, the ultimate purpose of customer analytics is to give your business agility—the ability to react fast to market changes. It is all about agility, being able to make the right decisions at the right time (e.g., when to launch new campaigns and what they should be about, when to develop new products and in what direction, when to improve the way you do deliver your service and what is good

enough, when to react on competitive moves and what to do about it, etc.).

SEGMENTATION AND DATA WAREHOUSING

This section discusses what segmentation is as well as how to implement a segmentation model. The way you can use a segmentation model is closely linked to whether it is also present in a DW or another organization-wide data repository or whether this segmentation is an abstract idea existing only on a PowerPoint level.

The basic idea behind segmentation is that customers have different needs, wants, values, behaviors, and so on. In an ideal world, we would of course like to treat every customer individually and according to his or her specific needs and values. Practically, however, very often this will not work because we simply do not have information about the individual customers' needs and wants, and acquiring this information would be too costly, if the customer was willing to give it to us in the first place. In cases where we have this information on a customer level, customers might not be willing to pay us what it costs to deliver and produce tailor-made goods according to their individual requirements. There are, of course, many examples of customer-made production that is successful. However, there are also many where it is not—just think about the whole historical shift from carpenters to mass-produced IKEA furniture. Therefore, the optimal number of segments is a matter of balancing between the costs of individualization versus to what extent customers are willing to pay for this customization.

In this book, we categorize customers in many ways: whom you should sell more to and who is valuable to us according to different customer needs, and so on. One central lesson here is that you should stop thinking about segmentation as if there is only one dimension to see customers through and start talking about needs-based segmentation, value-based segmentation, segments ready for different kinds of up-selling, cross-selling based segmentation, communication-based segmentation, churn-based segmentation, segmentation based on dunning procedures, risk-based segmentation, and more. This might sound confusing, but you also learn that customers vary in many

ways, and each way can form a basis for segmentation. After all, segmentation is just grouping customers as a result of some sort of similarity.

SEGMENTATION BASED ON DATA WAREHOUSE INFORMATION

Throughout this book, there is an ongoing discussion about two ways of doing needs-based segmentation depending on whether it is generated from a DW or from questionnaire data, where needs-based segmentation is defined as a categorization of customers with similar buying criteria, which could be based on prize or different product features like the safety of a car, the comfort of a car, the carbon footprint of a car.

If your needs-based segmentation is based on DW data, to a certain extent, the segmentation must have been created based on your own organization's customer information through the use of analytic techniques. The benefit of this sort of analysis is that it is relatively easy to make segmentations of your full customer base (depending on your data quality). That is, you know on a one-to-one basis which customers belong to which segment. This is in contrast to a situation where you have five segments based on an abstract segmentation model, but you do not know which customers fall into which of the five categories.

Internet-based companies are an interesting example of stores that naturally could focus on a one-to-one relationship with their customers since they have vast amounts of transactional data from the web logs and eventual transactions. These web logs can inform companies about how the customers came to their homepage, how they click around, who purchases what and how often, what typically is purchased together, and the home addresses of those who made physical purchases. Pop-up surveys are easy to include in this media. Other types of organizations that typically have very detailed customer information are banks, telecom operators, and insurance companies, since their services typically are subscription based, they know their customers on a one-to-one basis, and the interactions can be electronically stored and used for later analysis.

SEGMENTATION BASED ON NON-DATA WAREHOUSE INFORMATION

If you have no customer base or available data about it or if the DW data simply do not give you some actionable segments, you can be forced to go for non-DW segmentation. You can segment your customers based on many sources as well as combined sources. Typically, however, your segmentation logic will be based on input from subject matter experts or simply will be dictated by your organization or external business partners. If your segmentation logic is based on questionnaires, the types of segmentation can be the same as with DW-based segmentations, such as needs-based or value-based segmentation; however, often this methodology allows you to segment only those customers in your customer base who replied to your questionnaire, since for obvious reasons you do not know anything about the needs of the nonrespondents. The benefit of segmentation based on non-DW data is that you can base it on a wider set of information, since in questionnaires you can ask about whatever you want, as opposed to segmentations based on the DW, where the customer attributes that your segmentation is based on is limited to the data currently stored by your organization.

Often larger companies with subscription-based funding need both DW- and non-DW-based segmentation, since they wish to run campaigns through the mass media and at the same time have CRM activities below the media line, such as emails and direct mail. Often there is no alignment between the media-relevant and the CRM-relevant segmentation models. One way of aligning these two is to make a series of customers, categorize which segment they belong to via a questionnaire, then identify the characteristics of the same customers based on DW data, and finally categorize the rest of the customers in the DW according to these characteristics.

As mentioned earlier, there are many ways to develop a segmentation model. The best one is probably defined by looking at what you want to achieve, the costs and the benefits of the different approaches, the usefulness of your DW, and the long-term strategic objectives and key stakeholders. There are, however, some elementary points that can serve as a strong indicator of which direction you should pursue.

First of all, the DW-based segmentation model is very powerful for companies that are focused on CRM activities executed via below the media line through email activities, personal calls, and written mail. Such companies know their customers on a one-to-one level. Alternatively, externally based segmentation (based on subject matter experts or questionnaires) is a very natural tool for companies that do not know their customers by name or are focused on acquisition through mass media activities. Examples of such companies are traditional stores where there is no registration of who purchased what or how many times a customer visited a store.

Regardless of how you get to your DW-based segmentation, there needs to be an alignment between your acquisition processes and the way you treat your existing customer base. From a customer experience perspective, there should be a sense of continuity from what you expect to get when you become a customer to what you get when you have become a customer. From an organizational perspective, confusion and lack of engagement from the rest of the organization can result if the market intelligence department promotes one version of the truth used for acquisition activities, while the customer analytics department promotes another customer view for CRM purposes. In such cases, the rest of the organization will not know what it should deliver in order satisfy the customers.

OTHER CONSIDERATIONS

In general, a segmentation model, like most other tools, is only as good as those who use it. Therefore, if you are responsible for developing a segmentation model, the first thing you should consider is who could potentially use it. The exercise is relatively simple. First, sit down with an organization map and identify all the different functional areas and processes. For each of these potential users, brainstorm how customer segmentation could add value to each individual functional area or process. After you finish this homework, start setting up meetings with existing and potential stakeholders, and agree on what they really want. One stakeholder that should be of particular interest is the strategic department; if it adapts your way of doing segmentation, your organization will become increasingly customer centric in its

future method of going to market. The strength of a top-down implementation is that since a company strategy is signed off by top management, you will automatically get their buy-in. Thus, you have taken a first step into treating your customers consistently across all channels (which is an absolute basic in marketing). If your segmentation is based on DW information, you will also be able to report monthly on each segment in terms of how many new customers you get, turnover, complaints, how many leave you; this is essential feedback to the strategy department. The saying “You can’t manage what you can’t measure” therefore becomes very relevant here, since a strategy department will only develop a strategy plan based on organization objectives that can be factually measured.

NOTE

1. Gert Laursen and Jesper Thorlund, *Business Analytics for Managers: Taking Business Intelligence beyond Reporting* (Hoboken, NJ: John Wiley & Sons, 2010).