

14 Organizational Knowledge Sharing

The final stage in a single iteration of the marketing database analytical process detailed in this book is the dissemination of database-analyses-derived insights throughout the organization. In a conceptual sense, this step can be reduced to a deceptively simple equation:

$$\text{Knowledge sharing} = \text{Right insights} + \text{Right audience.}$$

The reason it is *deceptively* simple is because what constitutes the “right” insights and audience is far from self-evident.

Another reason why getting the “right” insights to the “right” audience is not necessarily a simple task is due to the combination of multiplicity of delivery facets and the cross-user aptitude, preference and usage circumstances. Stated differently, analytic insights can be shaped into a wide range of informational inputs and individual organizational users might have distinctly different informational needs and preferences. Hence it follows that developing a sound understanding of the latter will be invaluable in the effective “packaging” of the former. An in-depth discussion of the key considerations and specific recommendations is presented next.

Analytic Insights and Decisioning

To a varying degree, organizational decision making is hierarchical, the result of which is that managers’ informational needs tend to reflect their individual scopes of responsibility. At the same time, much of what comprises marketing information can be shaped into an array of otherwise considerably dissimilar presentation formats. Hence it follows that the goal of effective knowledge dissemination should be twofold: First, to identify specific “shared need” target audiences, and secondly, to design the “right” informational content and presentation for each audience type. Doing so is the necessary prerequisite for transforming competitively generic information into competitive advantage-creating knowledge.

In practice, custom fitting information to end users’ needs entails determining the appropriate level of detail and the scope of coverage, and then matching the so-delimited slice of the total available information with the audience most likely to benefit from those insights. The lack of alignment between the end users’ specific informational needs and the scope, coverage and the delivery format can significantly diminish the value of data-analyses-derived insights, effectively wasting organizational resources and forgoing potential opportunities hidden in the “lost in translation” insights. The most brilliant

and innovative analyses won't yield much value unless they are expressly incorporated into the decision making process.

In short, the key to effective knowledge sharing is the understanding of “who needs what.” Overall, those with more tactically focused, narrower responsibilities usually need more disaggregate, detailed insights, while those with broader, more strategic responsibilities will be better served by more highly “processed,” or summarized and contextualized insights. A growing recognition of functional and other within-organization informational need dissimilarities is beginning to manifest itself in changing management practices and informational system developments. In terms of the former, the access to information has been gradually broadened throughout organizations—for instance, key brand and promotional performance metrics that used to be made available only to senior-most managers are now routinely communicated to a broad range of middle and even staff managers. Responding to these changes, information systems vendors, such as those offering database reporting tools, began to develop a broader range of information processing and delivery platforms. Of particular interest—and applicability—to the promotional knowledge creation process detailed in this book are *management dashboards* and *scorecards*, both of which are ideally suited to the demands of the marketing analytical reporting. Their origins and present-day functionality are outlined next.

Business Intelligence Systems

The 1990s witnessed a strong growth and a proliferation of business intelligence (BI) systems, which are computer applications purporting to help decision makers use communication technologies, data and statistical/analytical models to identify and solve problems. The origin of the first BI systems can be traced to enterprise data warehousing projects embarked on by most large organizations throughout the 1980s and 1990s (see Chapter 6 for a discussion of *data warehouses* and related data organizational structures). By far the most common reasons driving these initiatives were to bring together multiple legacy systems, and to develop user interface tools to support data analyses and reporting.

The bulk of the BI systems can be categorized as either *model-* or *data-driven*. The model-driven systems are built around data modeling capabilities, such as optimization algorithms, predictive models, decision simulations or decision trees. As such, these systems are geared toward drawing inferences and generalizing beyond the confines of the available data—in other words, they are focused on the prescriptive aspects of the analysis of data.

Unlike the model-based systems, data-driven systems are constructed around the more conceptually straightforward data mart or data warehouse-based summarizations, typically utilizing online analytical processing, or OLAP engines. These systems do not attempt to draw inferences from data, but merely try to summarize it. In other words, in contrast to the more prediction-minded model-based BI systems, the data-driven systems tend to be primarily descriptive in nature.

Regardless of the underlying data processing capabilities, BI systems ultimately produced standardized (i.e., fixed format, template-based) reports. Once structured, a standardized report template was usually reproduced on a periodic (most often weekly or monthly, but also as frequently as daily) basis, conveying snapshots of a fixed set of initially chosen operational metrics, such as sales or inventory levels, giving the

organization an easy access to the key up-to-date business performance metrics. Though beneficial to some users some of the time, by-and-large, the BI systems-originated reports were nothing more than collections of ad hoc, unconnected informational tidbits incapable of discerning *cause-effect* relationships. In other words, though this basic reporting functionality yielded some insights into “what-is,” it largely left the questions of “why” unanswered. Consider a period sales report capturing weekly or monthly sales and promotional expenditure levels. Though providing a convenient summary of the said metrics, such a report says nothing about sales incrementality relating the impact of promotional spending on sales. In short, it fails to answer one of the most (if not *the* most) important questions pertaining to promotional mix effectiveness.

Ongoing Evolution

The ongoing advancement of these early database reporting capabilities has been largely guided and shaped by a few key functional shortcomings. First and foremost was the previously mentioned lack of an explicit assessment of the causeneffect mechanisms, which is an impediment on the road to a direct assessment of treatment-attributable incrementality. Their second key limitation-turned-driver of progress was their focus on highly disaggregate level of analysis (i.e., focus on detailed metrics), coupled with a skew toward completeness (i.e., inclusion of all available metrics, whether related or not) over interrelatedness. In other words, rather than “telling a story,” a typical database report emphasized data-dump. And third, since such reports generally offered no specific conclusions, they were not targeted at any particular type of informational need. In short, they are constructed around all that was knowable, rather than noteworthy.

The underlying reasons were a mix of business considerations and technical specifications. In terms of the former, vendors were trying to recoup their development cost as rapidly as possible, to which end mass standardization was a logical choice. However, these were not the only reasons behind the early BI database reports’ generic informational structure. More specifically, a number of the vendors designed their offerings around somewhat limiting and inflexible treatment of input data matrices. In more operational terms, the reporting functionality was usually built around row (cases), but not column (metrics) summarization, which placed considerable limitations on the assessment of the underlying causal factors. In other words, a “typical” business report could not draw a clear line of differentiation between important and trivial metrics, or between persistent and spurious associations.

The good news is that the next generation of the basic BI-supported reporting, known as *dashboards* and *scorecards*, successfully tackled and surmounted the vast majority of the limitations of the original BI-supported reporting infrastructure.

To a large degree, the development as well as the ongoing evolution of dashboards and scorecards has been guided by the limitations of the BI systems they effectively replaced. More specifically, it was guided by the desire to offer a more explicit assessment of causal relationships, while also providing an expressed differentiation between persistent and spurious effects. At the same time, the target audience for these informationally richer insight delivery mechanisms has also steadily expanded beyond the initially narrowly defined set of top executives. And so while the management information systems of the 1980s and 1990s were targeted only at a handful of the senior-most decision makers, nowadays, dashboards and scorecards serve the informational needs of a wide range of organizational managers. In fact, the rapid proliferation of their use is illustrative of the

true utility of decision-aiding knowledge, which is to inform and guide a wide range of tactical decisions.

Dashboards and Scorecards

The earliest precursor of what is now known as *dashboards* began to appear in the mid-1980s, and it was then known under the moniker of *executive information systems* (EIS). True to their designation (i.e., “executive”), the circulation of the EIS was typically limited to the very highest levels of organizations’ management, such as CEO or Chairman of the Board. Consequently, their success was limited, in large part because their readership was so limited, but also because their data analytical foundations were still relatively immature. However, a couple of decades is quite a long time in the information field, and so a lot has changed since the early EIS days. First and foremost, the next generation of what used to be known as executive information systems are no longer targeted at just a handful of the very top managers—in fact, the qualifier “executive” is rarely used in reference to dashboards and scorecards, both of which were pushed down through the organization to provide relevant information to a particular manager, rather than just the top two or three executives. Second, the scope of both has been expanded to cover a broader cross-section of a particular decision domain, all the while being expressly focused on decision-guiding, persistent effects, while forgoing lesser important details.

Figure 14.1 depicts the relationship between basic BI reports, dashboards and scorecards, in term of their respective level of detail and the informational scope.

As shown in Figure 14.1, the evolution from basic database reporting capabilities toward the more summarization-oriented dashboards and scorecard entails a decrease in informational detail along with the associated gains in the scope of captured information. So, while basic report preparation carries with it a relatively light metric selection burden, dashboard and scorecard development places a progressively more significant metric selection burden on analysts.

Usage: Dashboards vs. Scorecards

Overall, there are a number of distinct similarities between management dashboards and scorecards, while at the same time there are clear usage and application differences. In terms of similarities, both dashboards and scorecards rely heavily on data integration and visualization, geared toward conveying critical, decision-aiding insights. At the same time, considerable differences exist between these two communication tools in terms of

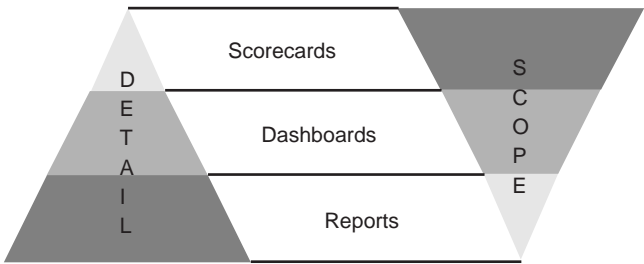


Figure 14.1 Scope vs. Detail

“how” the data is being integrated and “for what purpose.” Hence, the key to developing a robust understanding of when one should be used vs. the other lies in clearly delineating their usage and application differences.

First and foremost, dashboards purport to inform their users *what* they are doing, while scorecards are geared toward telling their users *how* they are doing. In other words, dashboards communicate performance and scorecards chart progress, which ultimately means that the former are more tactically focused, while the latter are more strategic. More specifically, the difference between these two modes of information visualization is most evident in the context of their *purpose*, *inputs* and the *visual format*.

Purpose-wise, the overall goal of a dashboard is to display performance-related information, while the goal of a scorecard is to show progress on stated organizational objectives. It means that while the former is a performance monitoring tool, the latter can be considered a performance management instrument. In a typical promotional context, this difference parallels the distinction between campaign result tracking (dashboard) and the overall performance of the entire promotional mix (scorecard).

Input-wise, dashboards tend to be built around singular events described in terms of narrowly operationalized metrics, while scorecards tend to offer a cross-event, summary view emphasizing performance proxies often referred to as *key performance indicators* (KPIs). In promotional terms, the distinctiveness between these two types of inputs parallels the difference between the performance of a single promotional campaign and the overall impact of promotional efforts comprised of multiple campaigns. Hence, a dashboard-type mechanism is appropriate for an ongoing tracking of distinct promotional events, while a scorecard-type instrument should be considered as the means of wrapping—and summarizing—the performance of multiple promotional events. In that sense, dashboards’ contents—i.e., its metrics—are usually tailored to the characteristics of a campaign and as such, will likely vary across campaigns. On the other hand, scorecards’ campaign performance indicators will tend to be more “fixed,” which is largely a requirement of maintaining longitudinal continuity of the progress measurement process. In general, scorecard performance indicators can be categorized as either lead or lag indicators. The former (exemplified by customer satisfaction scores or the number of planned campaigns) track factors that are expected to impact future outcomes, while the latter (exemplified by sales or profit incrementality) measure the impact of past activities.

The third of the key dashboard–scorecard points of differentiation is the use of information visualization. This is an important consideration given that roughly 70% of the sense receptors in the human body reside in our eyes, which makes us particularly adept at processing properly structured visual stimuli (hence the expression that “a picture is worth a thousand words”). On that note, though both dashboards and scorecards take advantage of visual display of information, the latter tends to make a more extensive use of it. Given that the amount of information that needs to be “packed” into a scorecard can be considerable, especially for a larger organization with a diverse and active promotional mix, “catching the eye” of the reader can be a critical step in successfully disseminating analytical insights. As pointed out earlier, impactful information visualization is particularly important for the more summary-oriented scorecards.

Choosing Between Dashboards and Scorecards

In the information sense, scorecards can be considered to be a subset of dashboards. Consider the following process depiction:

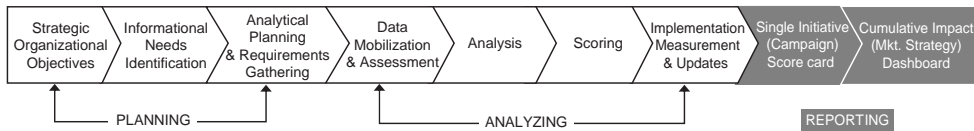


Figure 14.2 The Complete Marketing Database Analytics Process

The promotion analytics process detailed in this book is anchored in the delineation of strategic objectives of the organization, in terms of its point of departure, and in the development of a cumulative reservoir of competitively advantageous knowledge communicated via a dashboard, which demarks the marketing database analytic process' logical point of arrival. Of course, as discussed earlier, this is an iterative process and hence what is shown in Figure 14.2 is just a point-in-time snapshot. Each iteration will produce a set of findings, which will be built around treatment-attributable action incrementality (see Chapter 11 for the discussion of incrementality measurement). The resultant knowledge will then be disseminated throughout the organization with the help of an appropriately designed scorecard. In essence, the results of a singular promotional campaign will be captured and communicated here.

Complementing the scorecard-based single campaign reporting will be the cross-sectional (i.e., across campaigns taking place around the same time) and longitudinal (i.e., successive campaigns) accumulation of results, leveraging business dashboards. The key to a successful campaign scorecarding and cumulative dashboarding lies in a close synchronization of the two communication templates in terms of the composite metrics and reporting dimensions standardization.

First and foremost, it is not required that the analytics-supported scorecards and dashboards be limited to only a common set of metrics—it is, however, important that both contain a common core of metrics. Considering that as mentioned earlier, in practice, insights communicated via a scorecard can be considered to be a subset of what might be included in a dashboard, a scorecard should contain all metrics comprising a dashboard, but not necessarily the other way around. In other words, scorecards will tend to contain more campaign-specific details than dashboards, which is useful from the standpoint of understanding the uniqueness of individual events, while maintaining the necessary cross-campaign comparability.

To structure an effective reporting template, the following core business impact considerations need to be addressed:

- Type of campaign/program.
- Net effect: Treatment-attributable incrementality assessment.
- Contributing factors: Other business outcomes.
- Reporting periodicity.

Type of Campaign

Consider the discussion of the purchase funnel discussed earlier. Depending on their characteristics and the stated purpose, promotional campaigns may offer more or less direct means of assessing their treatment-attributable incrementality, but it is generally

feasible to put in place an objective assessment schema to enable cross-campaign comparisons. However, the type of measurement as well as the resultant precision will clearly vary as a function of the type of program and its stated promotional goals. For instance, a general advertising campaign aimed at increasing the brand's awareness will yield different, and less precise, impact assessment options than a direct mail program targeted at stimulating near-term sales. It follows that the dashboard and scorecard design process should start with an explicit categorization of the program/campaign type, in the context of the purchase funnel. The recommended simple categorization schema is presented in Figure 14.3.

In effect, all promotional programs can be grouped into two non-overlapping categories: 1. those targeted at building awareness, and 2. those geared toward incenting near-term purchases. Although as suggested by the notion of the purchase funnel, all promotional efforts are ultimately driven by the desire to grow sales, individual promotional activities—i.e., single promotional campaigns and/or programs—are usually targeted at a specific part of the funnel (see Chapter 10 for a full discussion). Consequently, a stand-alone promotional campaign will rarely attempt to both create the awareness of a brand/product and stimulate near-term purchase, for a variety of reasons, most notably, because of the nature of promotional media employed. For instance, awareness building is typically pursued through general advertising which does not offer an easy way of distributing *message-attributable* purchase incentives. The reason for that is certainly not that a TV commercial cannot announce to the TV-watching world a, let's say, 20% discount on all purchases of Brand X for the next 30 days—it is rather that there is no way of differentiating between purchasers who saw the commercial and acted on it and those who either did not see the said commercial or would have purchased the brand regardless. And conversely, direct promotional media, such as direct mail, could certainly be used as means of creating brand awareness, but considering that, on average, its cost ranges from a low of \$1 per piece (for a letter-type piece) to more than \$10/piece (for the so-called “dimensional” piece, which is a box-type mailing), it would make for a very expensive proposition in the market of 100+ million households. . .

Given the rationale presented above, promotional activities can be categorized—for the purpose of developing knowledge disseminating scorecards and dashboards—into either of the two mutually exclusive categories shown in Figure 14.3, as the first step in the process of developing insight reporting templates.

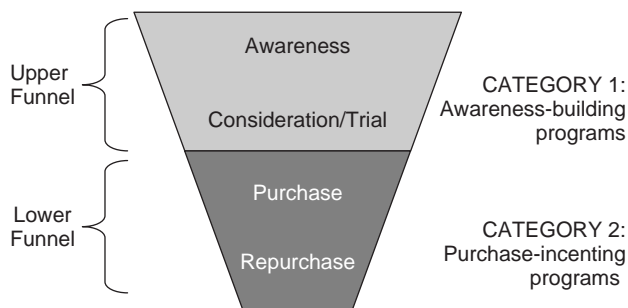


Figure 14.3 Purchase-Funnel-Based Categorization

Net Effect

Let us re-visit the purchase funnel-framed impact evaluation logic first presented in Chapter 10, shown in Figure 14.4.

As detailed earlier, the individual components of the promotional mix, such as general advertising, direct mail or personal selling (shown as Impacting Medium in Figure 14.4) are most productive when aligned with specific components of the purchase funnel. Furthermore, given the inherent differences among promotional media, the choice of impact-assessing metrics (Evaluative Metrics) and the overall approach to impact quantification (Evaluative Logic) will be dictated by the specifics of a particular promotional campaign/program being evaluated.

In other words, the task of designing robust scorecards and dashboards entails a careful consideration of the specifics of impact quantification: What type of promotional media does a given campaign/program fall under? Which stage of the purchase funnel is it intended to influence? What are the key characteristics of the broadly defined evaluative logic, and what type of evaluative metrics are being employed?

A scorecard, which is primarily focused on communicating event-specific outcomes, such as response or purchase rates associated with a particular promotion should be more tailored to the specifics of the said event. On the other hand, a dashboard purporting to provide a cross-event summary will need to emphasize outcome commonalities shared by the individual events which it will encompass. In other words, dashboard metrics should be thought of as representing a “common denominator” of individual scorecards.

Furthermore, in the instances when the goal of a dashboard is to communicate the impact of marketing events stretching across multiple stages of the purchase funnel depicted above, its design will need to include the additional component of the cumulative impact of each of the successive events. Consider a direct mail campaign comprising several individual mailings, or “touches.” In principle, the goal of each individual mailing is the same, which means that from the evaluative standpoint it is important to quantify the share of the total outcome that can be attributed to each mailing. In a conceptual sense, this parallels the notion of partial R^2 used in regression models outlined in Chapter 10, which captures the contribution made by each variable to the model’s overall explanatory power. In both instances, objective, standard (i.e., scale-neutral) metrics allows an analyst to properly evaluate each successive event and/or entity in the context of the cost–benefit evaluative framework.

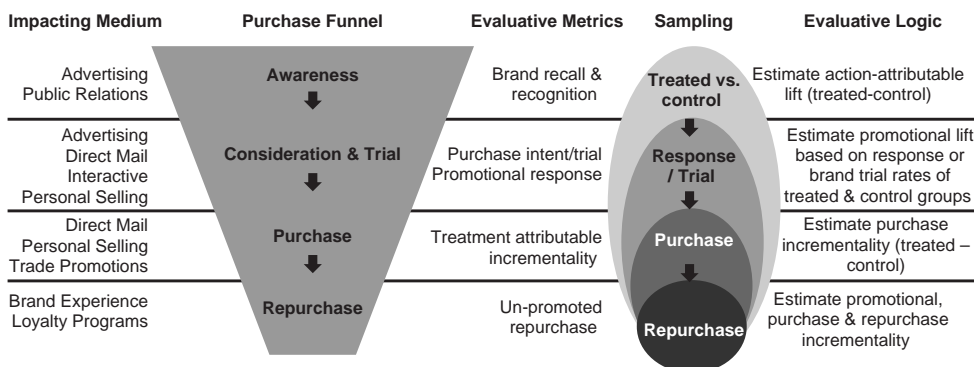


Figure 14.4 General Evaluative Logic of Promotional Campaigns

Associative Factors

The primary objective of both dashboards and scorecards is to address causal impacts of promotional stimuli on business outcomes, or factors that directly contribute to the observable outcomes. However, it may also be instructive to incorporate an assessment of corollary, or associative measures, which are metrics relating to the outcome of interest in a non-causal manner. In the language of empirical analyses, associative factors are correlated with outcomes of interest, but are not presumed to have a causal effect on the said outcomes.

Given the indirect nature of their relationship with outcome metrics, the assessment of the impact of associative factors should highlight their proxy value. In other words, the presence of these factors should be an indication of outcomes of interest, but in and of themselves, associative factors are not the drivers of observed outcomes. Measurement- and metric-wise, there are significant differences between causal and associative factors. In terms of the measurement approach, the impact of causal factors is assessed through action-attributable incrementality, which captures the amount of increase (i.e., lift) in the outcome of interest that is due to specific causal factors. On the other hand, associative factors have no impact, in the measurement sense, but instead they offer correlative evidence of changes in the observed outcomes, which is the proxy function mentioned earlier. This suggests that associative factors are somewhat more appropriate for scorecards than for dashboards.

In a broader promotional sense, associative factors can play an important role in what has come to be known as the “360° view of the customer,” which is the ability to integrate into a single informational reservoir the multiple—and often quite diverse—aspects of a single customer’s behavior. The 360° customer view necessitates the broadening of the analytical scope to consider not only the most direct, but also a broader range of corollary factors, thus incorporating associative factors alongside causal factors will offer the benefit of not only broadening the analytical scope, but also of expressly differentiating direct drivers of key outcomes from effect indicators.

Reporting Periodicity

Perhaps the most practical consideration involved in scorecard and dashboard design is that of reporting periods. Unlike the systemic issues discussed earlier, periodicity is strictly a practical decision reflecting the firm’s promotional strategy. There are two key issues governing that decision: the length of a single time interval and the frequency of reports.

As a general rule, the length of a single reporting time interval should encompass the duration of promotions being evaluated, assuming those promotions have stated effective dates (in general, many near-term sale-incentivizing promotions, such as coupons or temporary price reductions have stated “start” and “end” dates, while typical awareness-building campaigns, such as general advertising might only have implied “start” and “end” dates, which in case of advertising would correspond to the length of purchased media time). This suggests some key differences in the scorecard and dashboard design. Scorecards should combine (somewhat) concurrent promotional campaigns/events with approximately similar durations, while dashboards should amalgamate findings from individual scorecards, which means across time, as illustrated in Figure 14.5.

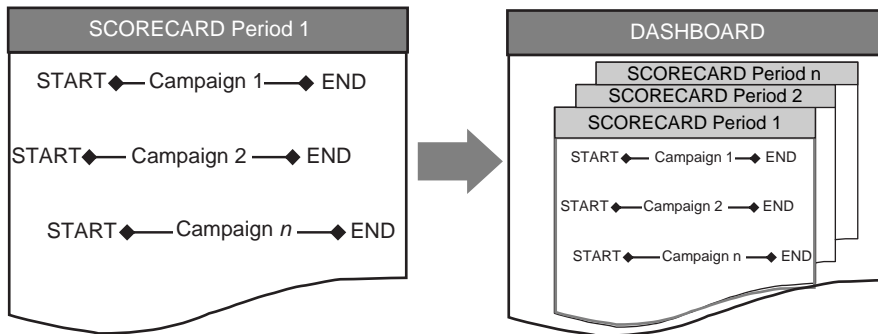


Figure 14.5 Scorecard vs. Dashboard Periodicity

Effective Presentation

To be effective as a communication mechanism, both dashboards and scorecards need to exhibit several distinct characteristics. Overall, these characteristics can be grouped into *visual design* and *content design* considerations.

Visual Design Considerations

Most notably, their design needs to be intuitive and personalizable; their construction guided by a combination of informational parsimony and visual simplicity. Furthermore, they need to make an appropriate use of visual cues, such as color and universally understood symbols, and, whenever possible, combine singular informational elements into patterned displays.

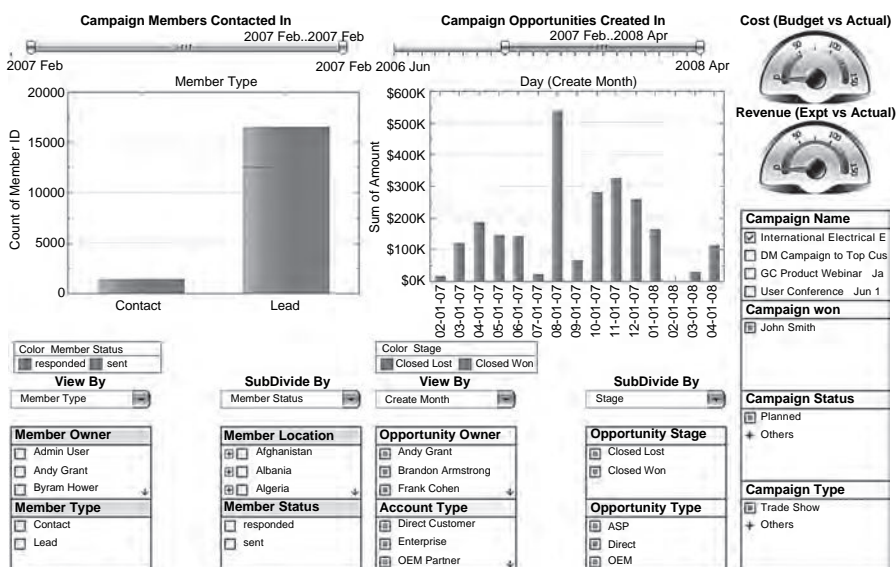


Figure 14.6 Sample Dashboard

The dashboard example (shown in Figure 14.6) communicates the overall summary of the combined impact of all direct mail campaign executed during the course of a year. Although there are many plausibly useful dashboard designs, a “typical” marketing scorecard should be built around the following dimensions:

1. **Aggregate Scores.** Commonly shown as the familiar-looking automotive gauges, this aspect of the report is intended to convey the combined performance of all campaigns (executed in the course of the year) on the three key performance dimensions: *response rates*, *repurchase rates* and *lift*. Typically, the results have been decided to enable implicit longitudinal comparisons—in other words, to express performance in relative terms (i.e., in relation to past performance).
2. **Drivers of Response and Repurchase.** Often leveraging another commonly used data visualization tool—a bar chart—the goal of this component is intended to highlight *causal factors* demonstrating the most pronounced impact on promotional response as well as the subsequent repurchase. To avoid excessive visual clutter, each of the graphical elements “hides” descriptive details that can be activated (in an electronic version, of course) by clicking or positioning a cursor appropriately.
3. **Treatment-Attributable Incrementality.** The intent of this section is to offer a summary view of (appropriately estimated) impact of the individual promotions. The emphasis here is not so much on absolute outcomes (e.g., 2.1% lift neither universally good or bad), but rather on relative contrasts, where different promotional programs are compared in terms of their ultimate impact.
4. **Highlights.** This is a bit of a “catch-all” category, which can be used to communicate learning that can be most helpful in planning and/or executing future promotions. Associative factors described earlier fall into this category.

The recommended general outline discussed above is one of the many potential dashboard designs. Its goal is to illustrate the key dashboard and scorecard design considerations mentioned earlier, most notably informational parsimony, visual simplicity and intuitive design. In general, the actual scorecard and dashboard template should be tailored not just to individual organizations, but to the informational needs of specific audiences within an organization. Thus the same fundamental information might be circulated throughout the organization in several different formats, all with the goal of increasing its utilization. At the same time, reporting templates should exhibit a fair amount of cross-time stability to aid in longitudinal comparisons, thus enabling more accurate longer-term performance trending.

Report Deployment: A Normative Framework

As much as an eye-catching and easy to “see” design is critical to capturing the intended stakeholders’ attention, powerful informational content is a necessary prerequisite to assuring the desired impact. The following framework offers a universally applicable structured set of considerations that can be used to guide the development process.

The Normative Report Design Framework presented here is built around the three key dimensions of *function*, *what to report* and *how to report*, as depicted in Figure 14.7.

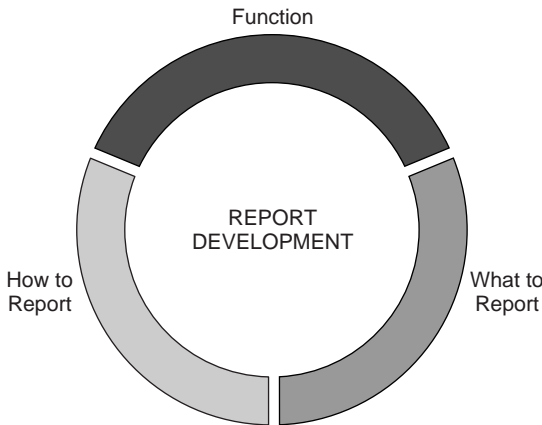


Figure 14.7 Report Development Considerations

Function

In the context of the promotion analytical process outlined in this book, a report can serve one of two key functions:

1. Assess and communicate performance.
2. Compile an aggregate overview.

Assess and Communicate Performance

The essence of product or service promotion is the execution of multiple initiatives, such as direct marketing programs or general advertising campaigns, geared toward influencing buyers' or prospective buyers' decisions. As discussed in earlier chapters, this entails different degrees of use of organizational resources, which in turn necessitates the estimation of each initiative's incremental contribution to the overall revenue stream. In terms of reporting, the broadly defined scorecard template is the most appropriate information communication tool.

The promotional scorecard (the *promotional* qualifier is used to differentiate it from other types of reporting mechanisms) leverages the general scorecard template outlined earlier, which emphasizes longitudinal (i.e., cross-time) and cross-sectional (i.e., across individual initiatives) measuring and reporting consistency. It emphasizes initiative-specific impact assessment centering on action-attributable incrementality for the direct assessment of the net effect, i.e., cause–effect relationships, of factors of interest, while also conveying the corollary impact of associative factors. Overall, the promotional scorecard summarizes and communicates the impact of clearly defined factors within a clearly defined timeframe.

Aggregate Overview

Taking a broader view of promotional efforts necessitates the development of a complementary—to the earlier discussed promotional scorecard—reporting template. To the degree to which, on period-by-period basis, marketing can be viewed as a sum of the initiatives that were executed during a particular time interval, the aggregate impact of

promotional initiatives can be assessed with the help of a promotional dashboard. However, to be effective, a promotional dashboard requires more upfront developmental effort—in particular, it requires the operationalization of the evaluative logic summarized in Figure 14.4.

As discussed earlier, a dashboard can be viewed as a summarization of multiple scorecards (see Figure 14.5), which in itself may lead to an (incorrect) belief that the dashboard construction amounts to nothing more than simply summarizing the specific scorecards falling within the desired focus (time and promotion type-wise). Unfortunately, there is a bit more involved here, specifically, the purchase-funnel-related considerations. Consider the differences between the upper and lower parts of the funnel (Figure 14.3) in the context of the evaluative logic depicted in Figure 14.4. The direct impact measurement of promotional activities designed with the upper funnel in mind—i.e., awareness and consideration—tends to be far more elusive than is the assessment of promotional activities geared toward the lower funnel, such as purchase or repurchase. Hence, the impact of the former is measured in terms of its effect on the latter, which is to say that the performance of the upper funnel promotions is expressed in terms of their persuasive impact of “converting” awareness and consideration (upper funnel) into purchases (lower funnel). At the same time, the impact of the lower funnel promotions is measured in terms of purchase incrementality. Consequently, combining individual scorecards will often mean amalgamating the somewhat different types of outcomes into a singular reporting schema.

Another, though not as critical a challenge pertains to potentially different mixes of causal vs. associative factors that may be associated with individual scorecards. In fact, that too has the potential of showing a pattern of significant differences between upper and lower funnel promotions, as the more “tangible outcome”-related lower funnel promotions are less dependent on the proxy qualities of associative factors.

In view of these and other potential challenges associated with the development of robust promotional scorecards, it is imperative to consider the functional qualities of report design in the context of the remaining two dimensions of the normative report design framework outlined here. The impact of “what to report” and “how to report” dimensions on the report design is discussed next.

What to Report

Once chosen, a promotional scorecard or a promotional dashboard template needs to be populated with the “right” information. More specifically, as captured in the knowledge creation process detailed in earlier chapters, tailoring the generic information to the specifics of the *user–decision* conjoint (i.e., who is the user of information and what are the specifics of the decision that is being made) is the necessary requirement to creating decision-guiding, competitively advantageous knowledge. In short, clear decisions regarding what is to be the content of those report are extremely important. In a normative sense, both the scorecard and the dashboard that are to be built for a clearly defined audience within the organization need to be shaped in accordance with the following set of considerations:

- User group’s needs.
- Materiality of content.
- Completeness of conclusions.

User Group's Needs

It is intuitively obvious that user groups within an organization are going to differ—quite considerably, at times—in terms of their informational needs. The needs of senior executives are rarely the same as those of line managers, both in the sense of scope as well as detail, just as the informational needs of database analysts will usually differ from those of brand managers in terms of the type of information. At the same time, all of those stakeholders have a vested interest in the performance of marketing promotions, though they all may contribute quite differently to their success. Yet all too often, they all have to drink from fundamentally the same spring of insights.

As suggested earlier, to become competitively advantageous knowledge, promotional information needs to be molded to the specific informational needs of its users. As expected, it starts with the delineation of the key user groups, followed by the demarking each of the group's information-type-specific needs, both in terms of content as well as the format. In fact, the content dimension should already be available, if the analysis used to generate the about-to-be disseminated findings were conducted in accordance with the Marketing Database Analytical Process, first outlined in Chapter 2 and recalled in Figure 14.8.

In practice, one of the more effective approaches is to prepare a sample dashboard and a scorecard, hold a brainstorming session with each group to adapt these templates to their needs. The final version of the templates should be approved by each group prior to the first “live” report being issued.

Materiality of Content

The informational content of a dashboard or a scorecard needs to demonstrate an appreciable impact on the decision making process of each user group. In other words, the content of a report has to be material, which is defined here as the degree to which any analysis-derived insights enhance the uniqueness and/or the depth of the stakeholders' knowledge.

The materiality of content should be determined in the context of the two types of influences outlined earlier: the causal and associative factors. Oftentimes, the causal factors that are deemed material to the decision making process are relatively self-evident when evaluating the impact of promotions. Depending on the specifics of the campaign, it could be treatment-attributable sales incrementality, repurchase rate or an increase in unaided recall or recognition, to name a few of the more common ones. On the other hand, the choice of the most appropriate associative factors tends to be quite a bit more fuzzy for two reasons: One, there are simply a lot more correlative than causal factors to choose from, and two, the distinction between “important” and “trivial” can be somewhat arbitrary.¹

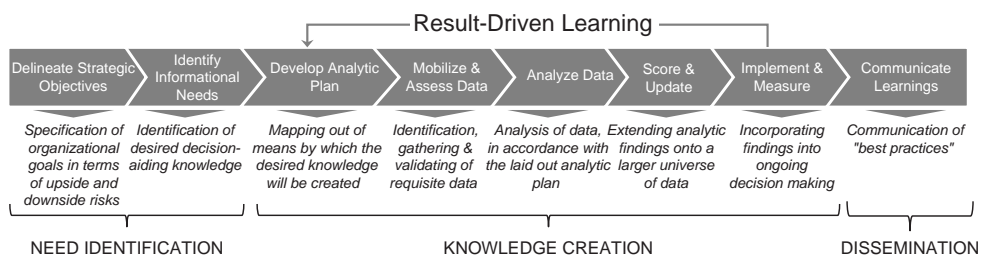


Figure 14.8 Marketing Database Analytical Process

Completeness of Conclusions

To paint an informationally complete picture, the report's coverage of its insights and any definitions of their interpretational boundary should be sufficient to make a positive contribution to the quality of its users' decisions. More specifically, the report's completeness is a function of its scope, boundary and the time interval covered.

The scope of a promotional scorecard should almost always be narrower than the scope of a promotional dashboard. In general, it is advantageous to limit the scope of the former to either a single promotion or a relatively homogenous type of promotions. The scope of a promotional dashboard will necessarily be broader to accommodate cross-promotional comparisons, but it too should be limited to somewhat similar types of promotions. Mixing and matching fundamentally dissimilar promotional types, such as general advertising and direct-to-consumer couponing will erect barriers to meaningful promotional comparisons by diminishing the number of viable causal and associative factors.

How to Report

As it is often the case, how information is packaged has a significant bearing on its end user utility. Of particular interest are the following dimensions:

- Accuracy
- Reliability
- Clarity
- Cross-sectional and longitudinal comparability.

Accuracy

Without the doubt, accuracy is the single most important aspect of promotional reporting. Inaccurate conclusions can lead to a wide range of undesirable consequences, from missed opportunities to misallocation of considerable organizational resources.

To be deemed accurate, dashboard- or scorecard-reported insights have to stem from correct interpretations of unbiased analyses of robust data. In a more operational sense, correctness of conclusions means that: the underlying data has been evaluated in terms of its credibility, representativeness and size; any statistical-method-related assumptions (such as those relating to distributional properties of data) have been validated and met; the margin of error of findings is not wide enough to potentially influence conclusions (for instance, the confidence interval for treatment attributable incrementality does not include "0" in its range); and the shown conclusions are valid interpretations of the data and can be replicated, if needed. The basic premise and the goal of the promotion analytical process depicted above in Figure 14.8 is to lay the procedural and methodological groundwork to ensure the accuracy of data analytical findings.

Reliability

Closely related to the notion of accuracy, reliability also ranks prominently among the report-defining dimensions outlined here. Technically, it is defined as the underlying facts and analytical processes that form the basis for findings and conclusions contained in a report being compiled, analyzed and disclosed in a way that could withstand quality review.

In the context of sample-based business analyses, the notion of reliability takes on particular significance. In view of basic economics, under most circumstances organizations have a relatively limited interest in sample-only findings, instead focusing on the degree to which these findings are true of a larger universe. For instance, it is encouraging that a sample of 1,000 trial buyers showed a 12% promotion-attributable purchase incrementality, though what is critically important is whether or not a full-scale rollout of that promotion will lead to a comparable sales gains. In that sense, the reliability of findings can often mean the generalizability of sample-based results, which in contrast to the earlier discussed accuracy of findings (which are binary in nature—i.e., are or are not true) should be projected on a *low-high* continuum.

Let's consider the aforementioned sample of 1,000 trial buyers. If the confidence interval-expressed promotion-attributable sales incrementality (see Chapter 11 for an in-depth discussion of treatment-attributable incrementality) includes "0" in its range, e.g., -0.3% to 3.9%, the reliability, or generalizability of such findings should be called into question. In other words, the range of the estimated impact suggests the possibility of no lift at all (since "0", or no lift falls within the estimated range), which translates into *low* reliability findings. In the way of contrast, if the said range was, let's say 1.3% to 3.9%, the findings should be considered more highly reliable.

Clarity

A lesson that many analysts find hard to remember is that oftentimes it is not just *what* the results are, but *how* we communicate them. Any scorecard- or dashboard-reported insight should be informationally unambiguous and interpretationally understandable to its stakeholders. Although as argued earlier, information should be tailored to the user type-specific needs (in order to become competitively advantageous knowledge), in principle, any user group tailored report should be understandable to any other user group. There is a vast difference between the usability and the understandability of results—just because a particular is not directly of interest to a particular audience does not mean that it should not be understandable to that audience.

Cross-Sectional and Longitudinal Comparability

For most organizations, promotional scorecard and promotional dashboard preparation is an ongoing process, where each set of reports captures a snapshot of promotional activities. It follows that it is important for an individual scorecard to be comparable with other scorecards, as well as an individual dashboard to be comparable with other dashboard. To ensure the ongoing comparability of each of these two types of reports demands cross-sectional and longitudinal standardization.

Longitudinal standardization is the invariance of the key report elements with regard to the passage of time—in other words, a dashboard or a scorecard report prepared today should be built around the same key elements as the same type of report prepared in the past. Cross-sectional standardization demands that reports encapsulating different promotion types could be compared in terms of their key outcomes. This means that, for instance, upper-funnel promotion-focused reports should be comparable, in terms of their key impact metrics, with lower-funnel promotion-focused reports. It is by no means an easy task in and of itself, but the earlier drawn line of demarcation separating causal and associative factors is further compounding the level of difficulty.

Longitudinal standardization requires solid planning and executional discipline to identify—and to stick with—a set of key evaluative causal factors, such as promotion-attributable sales and/or revenue incrementality measures. However, a different set of principles should be applied when considering associative factors. Here, cross-time change should be the focal point. In other words, as time passes and innumerable influences continue to shape competitive landscape and consumer preferences, the importance of different associative factors is expected to change, and it is those “changing promotional circumstances” that are of interest. The rationale behind this conclusion is relatively simple: The broadly defined role of marketing promotions does not materially change over time, which means that its assessment, in terms of specific metrics, should also remain relatively unchanged. It is hard to imagine circumstances under which promotion-attributable incrementality would not be the best way of assessing the business value of marketing promotions. At the same time, the circumstances surrounding successive promotions can likely change over time, which means that so should the metrics capturing those effects. Consequently, the cross-time measurement of associative factors should account for changing patterns in the importance of those metrics.

Mini-Case 14.1: Communicating with Non-Technical Audiences

The vacation ownership concept, commonly known as “timeshare,” originated in the 1960s and has since grown to become one of the most popular leisure travel options. The popularity of timeshares has multiple roots, but perhaps the most salient selling point is the idea of home-away-from-home comfort and convenience, relative to traditional hospitality accommodations. A typical modern timeshare features spacious, home-like floor plans and amenities, including fully equipped kitchens (inclusive of washer and dryer) with dining area, offered in a resort setting with swimming pools, tennis courts, spas and other amenities. Product-wise, there are two broadly defined sets of offerings: 1. the traditional *interval week*, where a consumer purchases the use of a particular unit for one or multiple weeks during the year; and 2. a *point-based system*, where a consumer purchases a pool of points which can be redeemed in a wide array of ways. The latter of the two options has gained popularity in recent years because it offers far greater time (of year), location and accommodation flexibility. In total, there are nearly 2,000 timeshare resorts in the U.S., spread over 47 states—the quintessential vacation spot, Florida, is home to about 23% of that total, followed by South Carolina and California, each with roughly 8% share. Household penetration-wise, little over 4% (or about four million) of U.S. households own a timeshare, which translates into roughly 96 million of potential prospects. . .

Clearly, the “true” universe of potential buyers is considerably smaller, as the level of affluence and vacation accommodation preferences vary widely across households, all of which is well-known to a leading developer of timeshare properties (a large hospitality company). What was somewhat less known were the specific owner vs. non-owner differences, which precipitated a comprehensive descriptive study focused on the delineation of a set of attributes that could be used to construct a prototypical profile of an “ideal” prospective owner. An important

consideration in the ensuing analysis was the usability of findings, as the majority of the study's constituents were not comfortable interpreting technically involved outcomes of statistical analysis. Hence the results of the analysis, a limited extract of which is shown here, were presented in a maximally non-numeric fashion, all the while communicating the numeric conclusions. In the example shown in Figure 14.9, the star-highlighted metrics (Age > 50, Income > \$85k, Homeowner and College Grad) are all attributes that are characteristic of owners, who as a group, have a significantly higher (i.e., above the mean level) proportion of individuals exhibiting those traits.

The second part of the analysis was focused on gaining insights into the effectiveness of new customer acquisition efforts, starting with a comparative assessment of several recent mail campaigns (see Figure 14.10). Each campaign was described in terms of the same set of three metrics, including *lift* (campaign-attributable net increase in purchase rate), *statistical significance level* (*Sig. level*) and

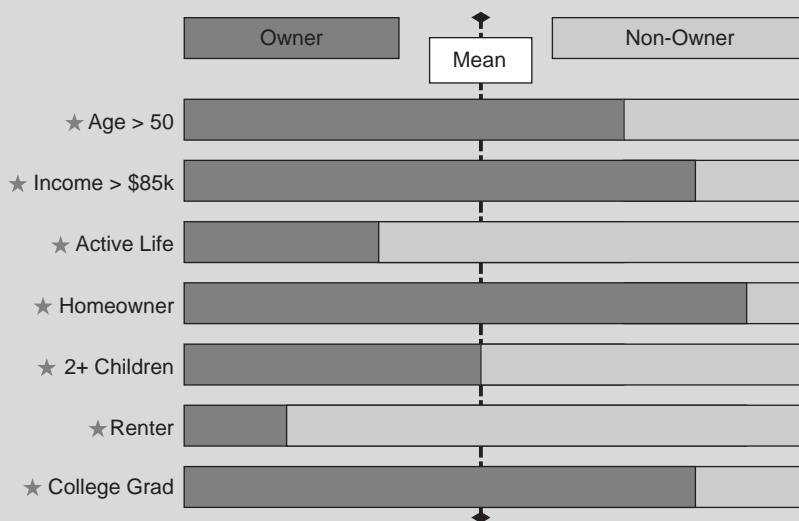


Figure 14.9 Index-Based Contrasts

Campaign 1	Campaign 2	Campaign 3
Lift = 2 Sig. level: 95% Volume: 1.1 M	Lift = 0.9 Sig. level: 90% Volume: 0.8 M	Lift = 0 Sig. level: n/s Volume: 0.9 M
<div>0.75%</div> <div>2.75%</div>	<div>1.15%</div> <div>2.05%</div>	<div>1.5%</div> <div>1.55%</div>
ControlTreated	ControlTreated	ControlTreated

Figure 14.10 Cross-Campaign Comparisons

volume. The side-by-side comparison revealed that Campaign 1 clearly outperformed the other two campaigns, which posed an obvious question: What factors made Campaign 1 more successful?

An In-Market Performance assessment (see Figure 14.11) exemplified a side-by-side comparison of the three campaigns, in terms of several key Evaluative Metrics, including *open rate* (% of the total offer recipients who open the mailing), *action taken* (% of total offer recipients who took the desired action, such as making a tour reservation), *offer redemption* (% of total offer recipients who redeemed the offer for a free or discounted resort stay) and *purchase rate* (% of total offer recipients who became owners). Evaluation-wise, the more fully filled ($\frac{1}{2}$ vs. $\frac{1}{4}$) the individual performance icon, the better the particular campaign's performance on that attribute (as shown in the In-Market Performance graphic, Campaign 1 excelled at compelling recipients to open the mailing and ultimately making a purchase).

Taking the explanatory inquiry a step further, to be complete, the explanation demands linking the “who” with the “what” of the winning campaign, to bring about a deeper understanding of the mechanics of the persuasion process. *Purchase funnel* is a widely used explanatory approach designed to elicit relevant insights that can further an understanding of the unique combination of respondent and campaign attributes that resulted in a comparatively well-performing campaign (see Figure 14.12). In principle, purchase funnel parallels the four-step persuasion process of awareness, consideration, trial and purchase, but this general framework is usually adapted to the specifics of a particular project—here, the focus of the analysis was on linking consideration (as operationalized by recipients opening the offer letters), offer redemption (as measured by recipients' taking the promoted action), and purchase. As used in the context of this study, the purchase-funnel-based analysis aimed to delineate the specific campaign attributes that exhibited a measurable impact on increasing the offer's appeal, as well as the attributes of respondents that could be linked to systematic gains in successive campaign













In-Market Performance			
Evaluative Metric	Campaign 1	Campaign 2	Campaign 3
Open rate			
Action taken			
Offer redemption			
Purchase rate			

Figure 14.11 In-Market Performance

