FROM A SNAPSHOT TO A MOVIE
PUSHING THE BOUNDARIES OF MARKETING ROI

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INTRODUCTION

No firm that owns a strong leading brand would base its vision on its history. While firms should learn from the past, their ability to stay competitive often resides in their ambition to foresee and shape the future.

The marketers behind these brands will look into consumer data to spot new trends and craft possible futures, and they are likely to be less concerned with gaining a detailed understanding of the past. Their decision making process relies on a delicate balance of art and science: their vision and strategy being based on raw marketing talent and supported by deep consumer and shopper insights.

Yet, virtually all the available data from brand tracking studies is grounded in the past. True, with the advent of social media and new advanced technical solutions, companies have more real time information on consumer preferences, but the information tends to be mainly qualitative, with often incomplete or unreliable demographic information, making it harder to support marketing investment decisions.

At The Coca-Cola Company, the Brand Beverage Barometer (B^3) is a massive global brand tracker that informs decision makers on the way their brand's health is tracking against competition. It also enables marketing teams to get fact-based clues on how well marketing programs performed in terms of influencing consumers' brand attitudes and ultimately improving preference for their brand. (See figure 1.)

FIGURE 1, THE COCA-COLA'S BEVERAGE BRAND BAROMETER (B^3)

The Coca-Cola's Beverage Brand Barometer (B^3) reaches 21% of the world's population and covers 92% of the total volume of non-alcoholic beverages sold worldwide.[1]

However, even B3 is not immune to the limitations of large cross-sectional quantitative tracking studies: by the time the data is fielded, collected, uploaded into their monitoring system and then analyzed, marketers at Coca-Cola are already looking at the past.

To try to overcome this limitation, research studies often contain questions aimed at understanding future choice and at detecting early signs of new trends or changes of underlying values and attitudes. The answers are often combined to create sophisticated forward-looking metrics, but they are rarely used to develop a quantified understanding of possible future trajectories for their brands.

Of course, there are methodological limitations to quantifying change using cross-sectional studies. We all know the problems associated with collecting stated attitudes and behaviors, and how the extrapolation of past performance or more sophisticated correlation analyses can be misleading or a mere reflection of the past. However, more can be done to provide deeper and forward-looking consumer insights, even within the mentioned limitations.

Armed with the same visionary mindset that allowed it to develop one of the best brands in the world, Coca-Cola undertook the ambitious task to prove this. This paper will outline how Coca-Cola has used its global Brand Beverage Barometer study to create a strong and shared point of view on the future of its brands, and how this helps make better marketing investment decisions.

The solution that will be described was achieved through a behavioral and attitudinal segmentation and the application of a dynamic modeling technique called System Dynamics. Through this technique, supported by a formal process to interpret and manipulate the output, Coca-Cola is now able to project its current understanding of consumers' choices into future performance for its brands. The result is a strategic planning tool that can enable the identification of high return marketing initiatives scalable across regions and the creation of a common language able to connect business goals to marketing actions.

This approach is similar to taking a series of consumer snapshots, behaviors inherently from the past, and turning them into a series of frames, creating a movie. We will stay with the 'picture to movie' analogy and will describe the setting, the cast and crew, the technology and the distribution system that contributed to its success, and will project a movie trailer to help the audience visualize examples of the applications.

FOUNDATIONS OF THE APPROACH - THE SETTING

As with every movie, the setting helps us understand the thoughts and experiences of the characters. Similarly here, it is important to touch on the theoretical and empirical foundations underlying the approach, which are grounded on long established marketing and consumer theories, as well as on the empirical experience developed by Coca-Cola over the last 125 years. The basic principles and their implications can be summarized in three points:

1. *Consumers as resources* – The starting point is to take into the marketing realm the resource-based view of strategy.[2] Much like the level of water in your bathtub, a brand's consumer base has the properties of a reservoir (a resource): the only way to change its level (the number of consumers of your brand) is to act on its flows, by recruiting new consumers and by preventing existing consumers from defecting from the brand. One implication is that market research and marketing initiatives should focus on the consumer flows, rather than the totality of consumers.

2. *Different consumer flows may require different marketing actions* – For instance, recruiting new consumers (opportunity A) into the category is likely to require a different set of initiatives than preventing loyal consumers from increasing their preference for competing brands (risk B). Marketing textbooks can provide some theoretical foundations on which initiatives are best suited to act on which consumer flows. But the answer is likely to vary by country, by industry, and by the way an initiative is executed. Ultimately, good decisions reside in the marketers' superior knowledge of the brand environment in which the brand operates. (See figure 2.)

FIGURE 2, AS THE LEVEL OF THE WATER IN A BATHTUB, THE NUMBER OF A BRAND'S CONSUMERS CAN ONLY BE CHANGED BY ACTING ON CONSUMER IN- AND OUT-FLOWS

CONSUMERS AS WATER IN A BATHTUB

Recruitment and retention targets are likely to have different profiles
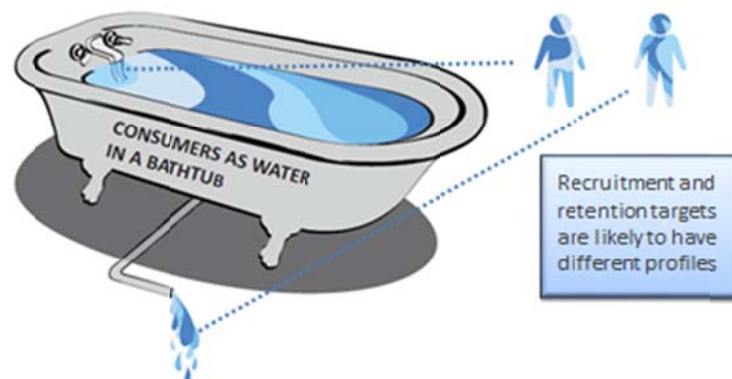
3.   *Consumer flows determine brand performance* – Building on the above points, we borrow from well-established marketing theories to recognize that consumers cannot be treated as one resource only. They can instead be grouped into a number of more or less sequential 'resources' based on their behavioral and attitudinal relationship as they relate to the brand. This process has long been recognized in the marketing field, and has been developed into a wide variety of alternative models;[3] these models tend, however, to focus on the various stages of consumer development, as opposed to the flows connecting these stages. When the consumer base is disaggregated into multiple resources connected by possible flows, then a number of possible pathways emerge. This knowledge can reveal risks and opportunities for the brand, providing strong clues on where retention and recruitment activities are likely to have the highest impact on brand performance. Using the bathtub analogy, this equates to identifying leaks and blockages in the pipes connecting multiple reservoirs. Mathematical models can then help simulate the impact of the system from fixing each leak and blockage, helping to identify the most problematic pipes. The results of this leverage point analysis will empower brand managers with better information to select the right marketing initiatives, deciding how much to invest, and maximizing the return from the investment and the impact on the brand. (See figure 3.)

FIGURE 3, THE BRAND CONSUMER BASE AS A SYSTEM OF RESERVOIRS CONNECTED BY PIPES
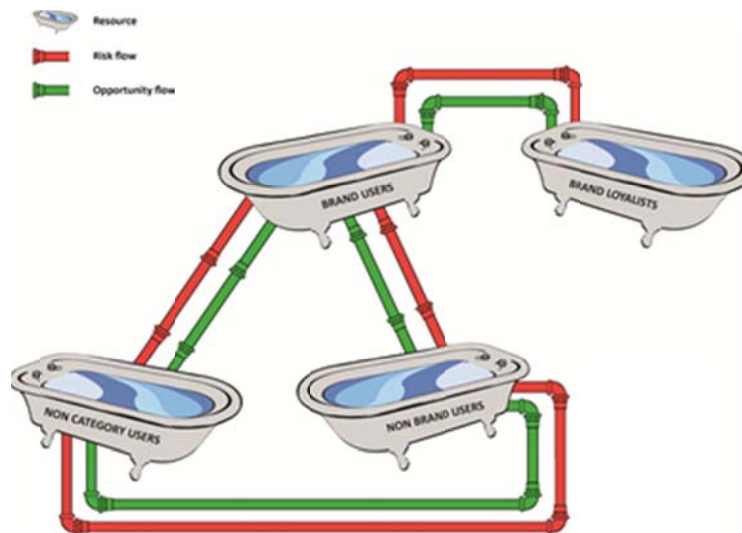
ORGANIZATIONAL ROLES - THE CAST AND CREW

Using our analogy, everyone knows a great cast makes a great movie. Similarly, the most important component in turning the Beverage Brand Barometer cross-sectional 'snapshot' study into a movie was not a technical solution, but the cast and the crew.

- *Senior decision makers - The Producers*: Senior executives in the strategic planning process are able to see the connections between marketing, insights and strategic planning and the need to strengthen these connections. Senior executives played a fundamental role for the birth, survival and success of the project. They had the guts to take a position, commit company resources and not walk away in the face of the challenges and inevitable ups and downs of the project.
- *K&I executives - The Director*: The director is a Coca-Cola Knowledge & Insights (K&I) executive, and the project sponsor. As the expert connoisseur of all consumer data available to the company, he was the one with the critical knowledge of what was and what was not possible; rather than making what is not possible a limiting factor as often happens, he was able to apply creative thinking to develop innovative ways to use the data and to work within its sample size and statistical boundaries. Furthermore, he had a strong team of K&I associates in different countries that provided feedback on early applications and adapted the screenplay to every one of their markets to make it locally relevant.
- *Marketers - The Actors*: A good script without good actors might make a good book, but would never be a great movie. Actors are those that take ownership of a role and inject passion into the plotline. Quantitative analysis alone, generated by a prescriptive process, is unlikely to generate a real impact no matter how sophisticated the underlying mechanisms are. This is the most common reason for failure of modeling exercises in any company. A senior global marketing director took an active role in the project, by listening to the needs of the marketing teams in the various regions and by driving the changes required to address these needs.

DETAILING THE APPROACH – LIGHTS, CAMERA, ACTION

Some movies owe their entire success to special effects and to the application of new technologies. In our case, no new technology per se has been applied.

The strength of the technology was how it was employed, particularly in the mix of tools applied and in their orchestration. There were two main components:

1. An attitudinal and behavioral consumer segmentation

The marketing science literature has long uncovered the need to combine attitudinal and behavioral consumers' attributes to create robust segmentations. Behaviors alone will provide a good understanding of who consumes what in today's market, but can only provide limited clues on consumers' future preferences and behavioral changes. Attitudes, with all the limitations and disconnect from what consumers articulate and what they then go and do, can provide important insights into how consumers' preferences are formed, how they are likely to evolve, and how brands can best reach their hearts and win their preference. Coca-Cola applied an attitudinal and behavioral segmentation to its proprietary Brand Barometer tracking study by leveraging existing questions on several attributes, such as frequency of consumption for the brand and the category, future purchase intention for the brand and for key competitors, general attitudes towards the category and so on. These variables were combined to produce two parallel segmentations:

- *Resource segmentation* – Assigning consumers to different resources, or reservoirs, based on their relationship with the brand;
- *Flow segmentation* – The same consumers are then reassigned to different flows depending on their likelihood of switching between resources; these flows are essentially the pipes connecting the reservoirs.

This segmentation allowed bridging a very common gap of brand tracking studies. Respondents find it hard to describe how and why their behavior changed over time. So by nature, the switching questions are typically left to be answered through longitudinal studies, which can however only help us understand the past. In our case, this new segmentation allowed us to identify consumers that are *likely to switch* in or out of the brand. The focus is therefore on recruiting or retention *opportunities*, rather than actual flows.

### 2. The application of a dynamic modeling technique, called System Dynamics

As mentioned previously, the adoption of System Dynamics allows us to take the clear picture highlighted by the consumer segmentation and to transform it into a series of frames over time – past, present and future. System Dynamics has been widely used to understand the output generated by complex systems composed of multiple and interconnected resources.[4] Many examples have been produced to show how counterintuitive behaviors can be produced by even simple systems made up of only a few stocks, and several empirical studies have shown that the human mind is unable to simulate and project the output arising from these simple systems and the inadequacy of conventional approaches to effectively capture these dynamics.[5]

Although the underlying math is quite complex (a combination of differential and integral equations used to capture the dynamics of stock accumulation and depletion), the underlying principle is straightforward and very much in line with the resource-based segmentation, allowing us to move from insight to foresight.

The dynamic model that was constructed allowed us in fact to create a baseline scenario by simulating the evolution of the consumer base resulting from the initial level of the 'resources' and their changes through the in- and out-flows connecting them. The subsequent leverage point analysis enabled us to then identify the high priority consumer flows and the creation of best and worst case scenarios.

Finally, following the validation of the model and its outputs,[6] the most challenging and strategically important part was the design of a user-friendly interface that enables managers to visualize the model output and to modify the results based on their knowledge and intuition, without compromising the robustness of the original output. The interface, supported by a structured process to absorb and even modify the initial results, allows brand managers to bring art back into the science, and is key to the adoption of the approach at local market level. (See figure 4.)

FIGURE 4, PROCESS AND KEY COMPONENTS OF THE APPROACH
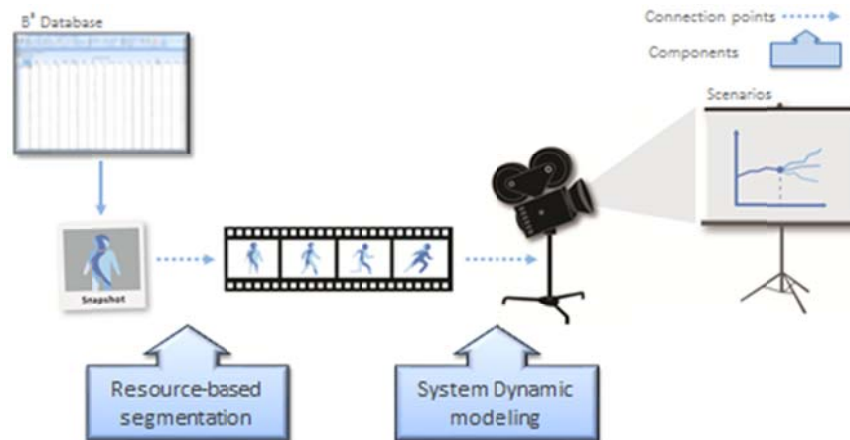
IMPLEMENTATION - THE DISTRIBUTION NETWORK

Bringing together data for a 90+ country study like the Coca-Cola Brand Beverage Barometer calls for a high degree of attention to detail to ensure the integrity of research results. Coca-Cola already has a 'distribution network' for all of their consumer data that is world class. All of Coca-Cola key consumer research studies are processed centrally and then distributed through a data-mining software platform called Coca-Cola Vision (CCV).[7] CCV was also chosen to distribute the key outputs to the markets; benefits of this choice include:

- *Easy dissemination and reduced resistance to change*: The CCV platform allowed multiple and diverse sets of K&I and marketing teams across geographies to effectively mine the Barometer data and interpret their results, applying their own personal market experience. Being the currency for insights data analysis at Coca-Cola, the tool allows for sophisticated queries but is still user friendly and easy to manipulate.
- *Fine tuning and validation of model*: The CCV platform allowed for a streamlined and quick process for fine tuning the model in its initial stages. Also, it gave K&I Associates the confidence that they can validate the relevance of the model for their own markets.
- *Positive ROI*: Through the use of CCV's integrated platform, Coca-Cola is able to harmonize and seamlessly combine data from multiple vendors, geographies and data sources. Harmonization challenges alone usually make modeling exercises much more complex and costly. Working with a harmonized data set made this solution quite flexible and effective.
- *Speed with which early insights can be brought to market*: Having built the resource-based segmentation and subsequent deep dives into CCV helped Coca-Cola quickly streamline the results. Without a dynamic tool it would have taken much longer for brand managers to interpret and act on the results. (See figure 5.)
- *Tracking of marketing actions and feedback loop*: the CCV tool makes it easy for the brand teams to track results of their marketing actions and detect what future is unfolding, enabling them to take early corrective actions if necessary.

AN ILLUSTRATIVE CASE EXAMPLE – THE TRAILER

Because of confidentiality requirements, we will use four local and corporate level applications to create a trailer to illustrate the advantages of adopting the approach in a large multi-national firm.

Example 1: Translating business goals into marketing actions. From both a corporate (global) and local perspective, this approach enables the translation of business goals (e.g., volume or market share targets) into marketing language (e.g., recruitment targets), allowing for the testing of future ambitions against the current reality of our brand's opportunities and risks. Through its scenario planning capability, it also provides possible alternative translations of these business goals, revealing alternative paths that can be taken to close the gap. The resulting marketing language, further strengthened by rich descriptions for these paths (e.g., demographic or psychographic profiles), has empowered The Coca-Cola Company with much more detailed understanding of how to reach its 2020 goals.

FIGURE 5, PROFILING RESOURCE SEGMENTS, GROUPED IN OPPORTUNITY (UP-FLOWS) AND RISK (DOWN-FLOWS) SEGMENTS, USING CCV
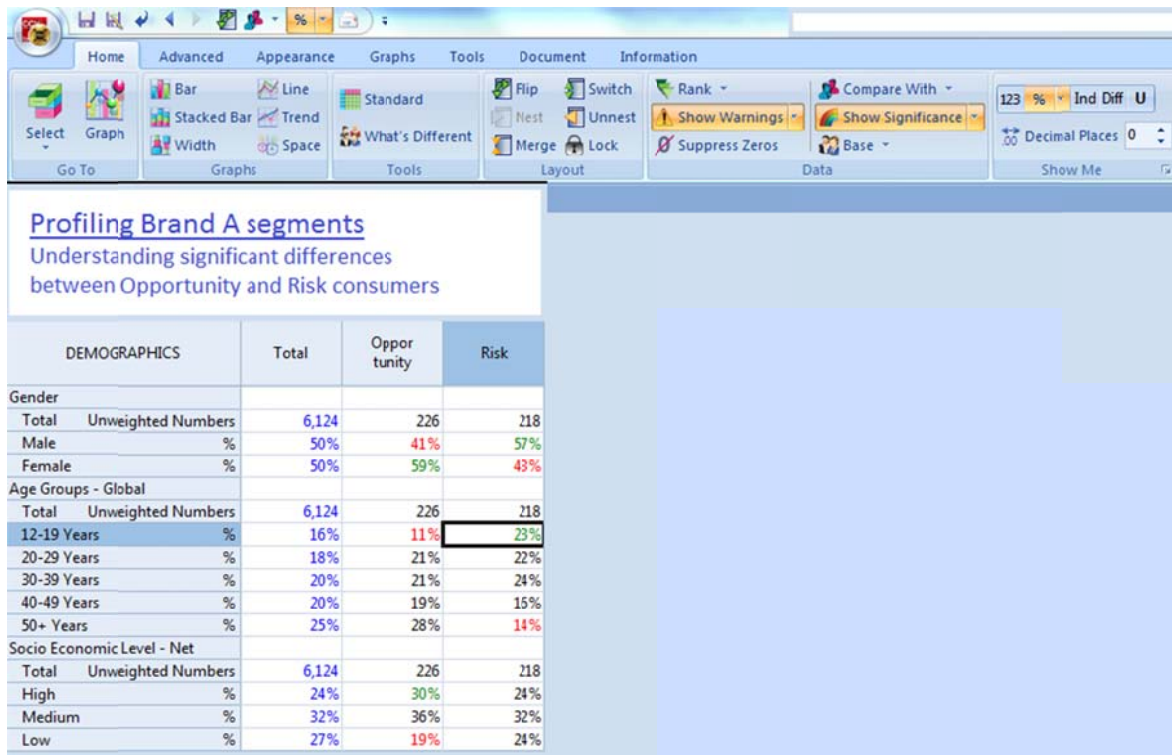
Example 2: New geographical market clusters. From a corporate perspective, this approach can inform innovative and insightful ways to cluster markets, based on the relationship between risk and opportunity and their demographics. The approach has in fact been applied to the top brands in their top 31 markets, creating outputs that are comparable and can, for instance, reveal clusters of countries that have equally high volume risk and opportunity, suggesting high churn and the need to undertake a very different set of initiatives than in other markets and to set different ROI expectations. For brands that have a global reach, this will provide a strong foundation for important investment decisions involving initiatives that can be scaled across markets, with huge benefits in terms of ROI and efficiencies. (See figure 6.)

FIGURE 6, QUANTIFICATION OF BRAND RISK AND OPPORTUNITY ACROSS GEOGRAPHIES TO IDENTIFY CLUSTERS FOR SCALABLE MARKETING INITIATIVES
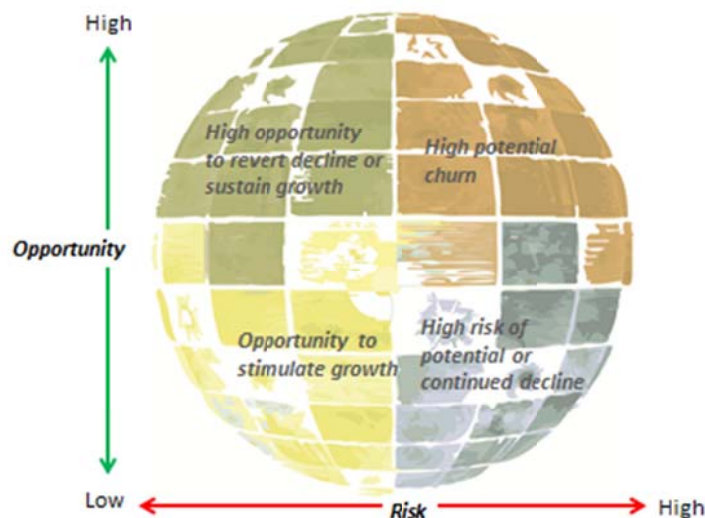
Example 3: Supporting brand strategy. The approach can also produce strong insights at the local market level. It has, for example, been used in a market where a new, successful brand variant introduction created a break from a history of declining or flat results. The feared scenario was that after an initial period of excitement and marketing push for the newly introduced variant, the brand would return to the previous path of flat or gradually declining sales. By projecting different futures informed by a clear understanding of the brands' resources and potential consumer flows, the marketing team could *fast forward* the impact of potential marketing initiatives on brand P&L and agree on the set of initiatives, their sequencing, and investment levels most likely to produce the best outcome for the brand.

Again, we cannot overemphasize how the brand managers' ability to build clarity and confidence on which actions are needed to realize the best case scenario for the brand, not the scenarios themselves, has made the difference. To date, the brand is still enjoying healthy growth.

Example 4: New insights into brand loyalty. Brand loyalty is often measured through metrics such as share of stomach or consumption frequency. By combining flow and resource segments it was instead possible to use current (resources) and potential (flows) future brand preferences to identify the 'sticky consumers': high frequency / high share brand users likely to 'stick' with their choice in the short- to medium-term future. This in turn allows us to quantify 'brand stickiness', defined by the percentage of sticky consumers of all high brand users.[8] Although this was not the primary objective of the work, this new measure allowed us to quantify the ability of a brand to retain its most valuable consumers, revealing differences between brands which would have not been visible through standard measures (e.g., consumer churn), ultimately enabling better marketing strategies.

CONCLUSION

In summary, this paper describes how a limited cross-sectional study has been turned into a powerful strategic planning and IMC (integrated media communication) productivity tool, giving marketers the ability to make better educated decisions on high-return initiatives.

The benefits go beyond the forecasts, as the future will invariably unfold differently from our expectations. It is not about forecasting the future, it is about enabling foresight, that is, the ability to create plausible quantified scenarios and to provide sufficient clues on how to realize the chosen strategic path. Driven by the multinational perspective and informed by local marketing wisdom, the value of the approach is its ability to enable the creation of goals and targets that are realistic, shared, and grounded in consumer data. It is not about how the movie ends, but whether the movie is good enough to stimulate meaningful conversations for its audience – the Coca-Cola marketing community across the globe. This movie is about what future firms want for their brands and how to get there, helping create a shared vision that ultimately leads to improved clarity and confidence.

Staying with the movie analogy for one more time, the target audience is not forced to buy the movie: local marketing teams decide whether or not to adopt the approach in their regions. And, as with many good movies, this new approach to brand planning has spurred a number of controversies around very delicate themes, such as the importance of recruitment versus transactional growth, and how it varies in different geographies. Far from settling the debates, it has however elevated the discussions by removing some of the semantic differences and by bringing facts to the table.

As the saying goes, all models are wrong, but some models are useful.[9] In the case that we have described, the usefulness of the approach resides in what marketers do with the output, rather than on what the model itself is.

To conclude, here are several snippets of the audience's reactions. In the words of different executives from the The Coca-Cola Company:

*"**This is a bridge** that helps us connect the Business Goals of key stakeholders with the Actions that business managers can actually manage. Move from "let's triple our revenue in the next 10 years" to "Grow brand X by 5% next year by recruiting 200,000 consumers that are currently drinking brand Y."*

*"**This is a scenario-painting tool** that allows us to test our future ambitions against current reality of our brand's strengths and weaknesses – so we know what we have to do to close the gap."*

*"This is a tool to **enable scaling up of marketing programs** – one thoughtware set traveling across many markets with similar growth pathways."*

*"It provides **common language** across different parts of the System – Planning & Execution, Marketing & Operations, Global Teams and Local Teams and so on. By providing common language it provides the basis for a unified vision of future goals and also the means to achieve them."*

*"It allows us to do **end-to-end planning**, execution and tracking of results through one platform and set of metrics, all of them grounded in consumer targets."*

FOOTNOTES

1. Illustration taken from Coca-Cola Europe and the Philosopher Stone (Pagani et al, 2010). For further details on Coca-Cola Global Tracker, please refer to the above paper.
2. Resources have been a key component in strategy development in the last two decades, and there is extensive literature on the subject. A managerial discussion of how resources contribute to competitive advantage – the so-called 'resource-based view' of strategy (RBV) – can be found in many strategy texts (e.g., Grant,2001, chapter 5]). A more extensive treatment of the concepts, including comprehensive coverage of the supporting literature, can be found in Barney (2001, chapter 5). Although recent interest in the topic was awakened in the mid-1980s (Wernerfelt, 1984), the fundamental importance of firm resources can in fact be traced back over 45 years (Penrose, 1959).The most comprehensive textbook with both the theoretical foundations of the approach described in this paper and examples of practical applications can be found in Strategic Management Dynamics (Warren, 2008). Also see Competing for Choice (Finskud, 2008) for some early illustrative examples.
3. See for example Marketing Management (12th edition) (Kotler and Keller, 2006).. Extensive information on alternative customer development models is also available online from the American Marketing Association: www.marketingpower.com/mg-dictionary.php.
4. System Dynamics originated in the 1960s from the work of Jay Forrester and his colleagues at MIT. The methodology is based on feedback control theory, which has been applied and refined in engineering over the past 150 years. The most successful applications of System Dynamics in business, as well as the underlying theory, have recently been summarized in Business Dynamics (Sterman, 2000), which is considered the best textbook for business practitioners desiring to learn more about the methodology. Kim Warren, of London Business School, has recently pioneered the application of System Dynamics to business strategy. His work culminated in the publication Competitive Strategy Dynamics (Warren, 2002), and new powerful examples of its application and theoretical foundations can be found in the more recent book Strategic Management Dynamics (Warren, 2008). For a brief history on system dynamics see also: Pushing the Boundaries of the Traditional Research Debrief (Raimondi et al, ESOMAR Market Research 2005 Conference).
5. A recent review of the subject is offered in Why Don't Well-Educated Adults Understand Accumulation? A Challenge to Researchers, Educators, and Citizens. (Sterman et al, 2009).
6. For a review of System Dynamics validation methods and the differences in commercial versus academic applications, see D. Exelby et al, The validation of system dynamics models, System Dynamics Review, 2000
7. CCV is a program for interrogating consumer research studies developed by Infotools for The Coca-Cola Company. Infotools uses a proprietary harmonization technology and delivers standardized databases and interactive reports that are accessed through CCV by Coca-Cola employees around the world.
8. For an extended explanation of the concept of brand stickiness, how it can be derived and examples of applications, see A New Approach to Loyalty Reveals Hidden Opportunities. (Raimondi, 2007).
9. Empirical Model-Building and Response Surfaces (Box, George E.P. and Draper, Norman R., 1987). .All Models are Wrong: Reflections on Becoming a Systems Scientist (Sterman, 2002).

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