



Deloitte marketing performance management

Helping clients understand
and optimize their marketing
investments

Content

Digital technology, Big Data and the future of marketing	1
What is the customer responding to?	1
An explosion of data and tools	2
Toward a new solution	4
So, what is Ncyte?	5
The Ncyte data model	5
Visualization: The analyst knows best	8
Baselines: A different spin on predictive analytics	9
Ncyte: An ongoing strategic offering	11
From change management to analytical services	11
Quantifying the benefits: A case in point	11
Helping marketers fulfil their mandate	12
References	13

Digital technology, Big Data and the future of marketing

Marketing is getting its due as a strategic plank in business strategy – it's no longer just a cost center to be controlled. CMOs are fast becoming key players in the boardroom and are facing unprecedented challenges, along with pressures and demands for accountability and performance. First and foremost, the advances of digital technology and dramatic changes in consumer shopping behaviour have conspired against the traditional marketer and changed the game for today's CMOs.

The data and analytical tools generated by this new digital activity are unprecedented and growing by leaps and bounds. Accordingly, marketers must adopt new data strategies or face a disadvantage. Digital communication and social channels used by the new consumer are putting pressure on marketers to make better decisions and react to market dynamics more quickly than ever before. One false move can destroy years of brand building.

CMOs require clear visibility into the impact of their marketing dollars and deep understanding of the channels and vehicles that drive performance. The optimal mix of brand-, customer-, and product-driven marketing is still the "Holy Grail," but the playing field has grown more complicated. New ways of thinking are required.

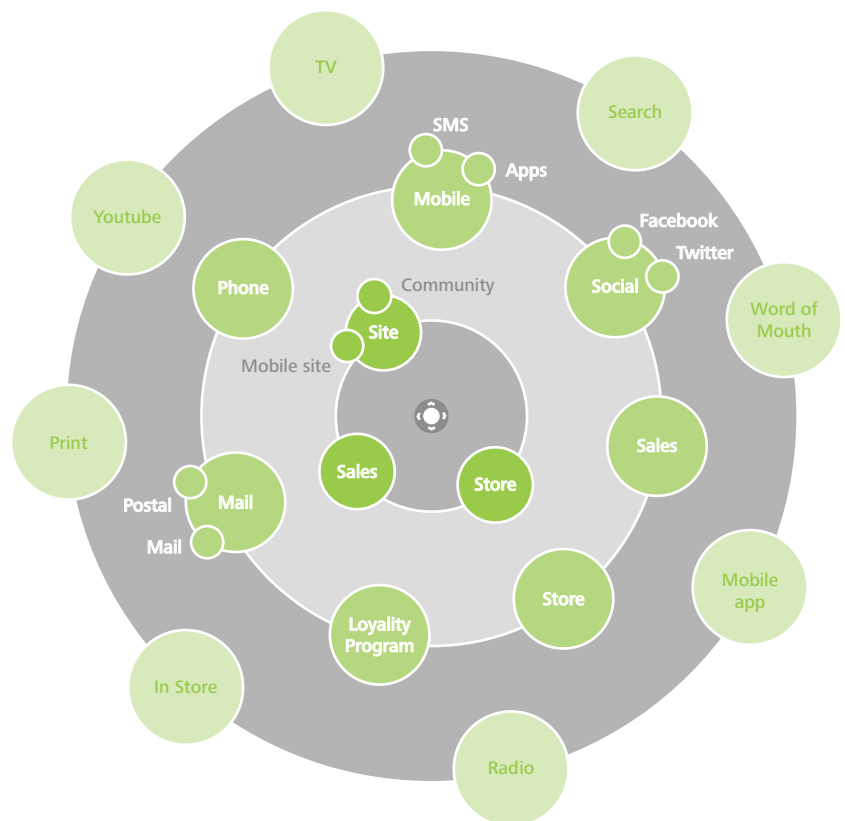
What is the customer responding to?

Digital technology has altered the marketing eco-system forever, employing a complex network of vehicles and channels designed to interact with and motivate customers. Figure 1 shows the many options that marketers have to engage with a consumer. Every company and brand uses a unique combination of vehicles to engage their customers. Each "path to purchase" now has more touch points than ever before, providing a rich data repository and insight into customer behavior.

All companies wonder if they're getting maximum value from their customer interactions. The data is available, but organizations struggle to understand which investments are making the most difference.

To leverage these touch points, organizations must learn how to harness data big and small so that they can derive the insights they need to better serve their customers. The integration of data from all of these touch points is the #1 challenge faced by organizations.

**Figure 1 – Defining today's marketing ecosystem:
How companies and brands interact with consumers**



An explosion of data and tools

The recent “Global CMO Study”¹ published by IBM states that only 48% of CMOs feel they are prepared for the volume and complexity of data in the next five years. In another report by EMC, researchers found that only 38%² of business intelligence analysts and data scientists strongly agree that their company uses data to learn more about customers, leaving a surprising number of companies ill-prepared to deal with the new marketing landscape.

The top item on the worry list is the current data explosion, followed closely by social media, mobile devices and shifting demographics. It is estimated that the total data generated will grow from 180 billion gigabytes today to 40 trillion by 2020.³ Younger people are becoming a more influential buying group, so knowing how to engage them through all types of communication vehicles, including mobile devices, is very important.

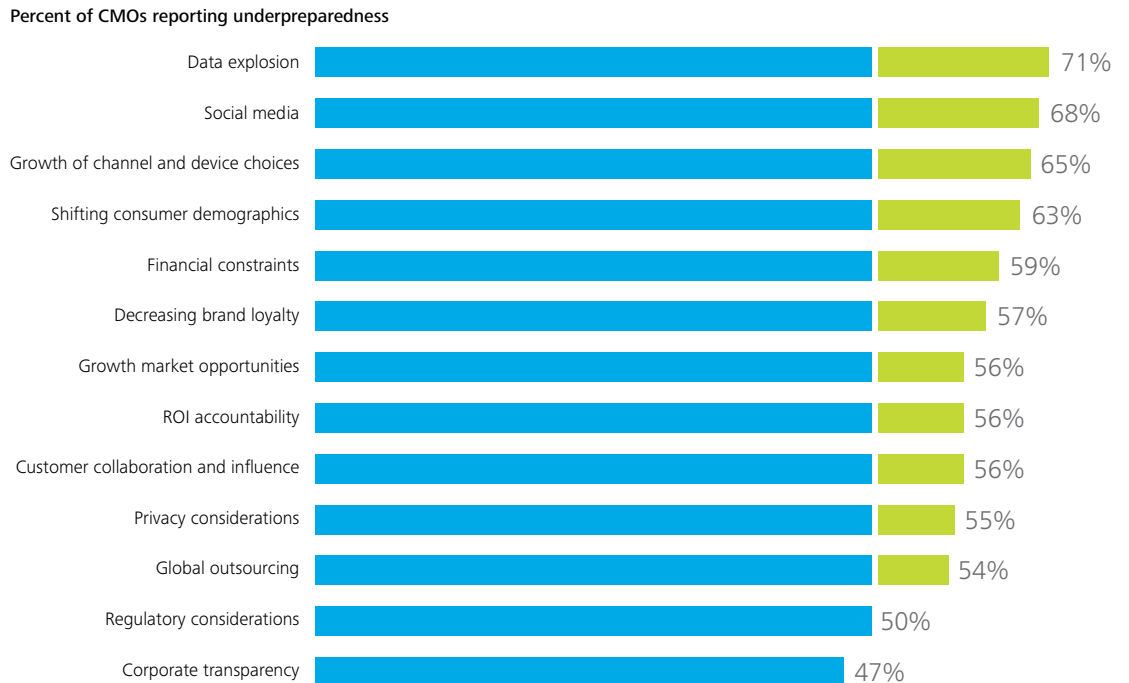
As a consequence of digital technology and the resulting data explosion, the software and solution offerings available to address these issues appear to be deep. The space is dominated by two polar extremes—marketing

automation software (MAS) and business intelligence at one end, and marketing mix consultancies at the other.

In a recent Deloitte Consulting CMO Council survey,⁴ CMOs were asked about the technology in which they planned to invest. Email marketing solutions led the list, followed by social and online community building, web site performance optimization, campaign management, and lead management systems.

“50 percent of respondents think they are underprepared to manage all but two [areas]: regulatory considerations and corporate transparency” CMO Study.⁵

Figure 2 – IBM 2012 CMO Study

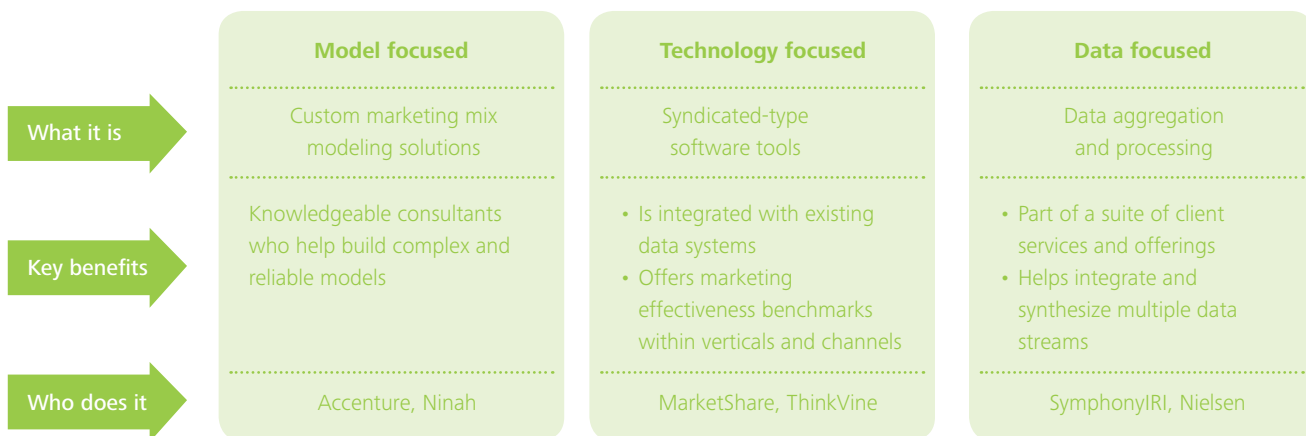


Given the access to software tools, why the lack of preparedness for the coming data and digital revolution quoted in these studies? Forrester provides a clue and describes the shortfalls of these technology solutions in the following way:

- Vendors have shown an inability to keep pace with the breadth of changes in customer activities regarding their interactions with the brand and their purchase channel usage.
- Vendors show a reluctance to adjust to the needs of online and offline to accommodate new functionality for things like real-time response tracking and event-based triggering.
- Most vendors offer planning platforms, but most do not offer forecasting or simulation to support strategic planning efforts.⁶

In the same survey, CMOs were asked to define their key mandates. The top three responses were “drive top line growth,” “define brand” and “define value proposition”. To address these challenges, marketers have access to vendors that offer modeling solutions such as marketing mix modeling. Forrester groups these solutions into three categories: Model-focused, technology-focused and data-focused.

Figure 3 – Solutions that are available today to marketers



Again, Forrester outlines solution shortfalls:

- Typically, a one-off solution that addresses specific problems doesn't embed the model's insights into marketing's planning cycle.
- [Such solutions] rely on out-of-date data with models and insights delivered months after budgets were spent and the campaigns aired. To create more actionable and near-term insights, marketers need models that reflect the recent marketing investments.
- [These solutions] delegate the activation of the model's insights to third parties which typically means the intelligence of change remains outside the organization. Smart marketers need to rely on the change management capabilities of their vendor to make sure that decision processes and behaviors change in light of the model's outcome.⁷

Toward a new solution

The actual goal of a marketer is really quite simple to articulate, but hard to achieve. In short, marketers want to be able to give rational answers to the following questions:

- How does our marketing spend perform across all channels?
- How can we spend our marketing dollars in the right place to maximize and optimize MROI?
- Can we understand what our multi-channel customers need and want?
- Is our marketing analytical capability ongoing and agile?
- Do we have the ability to implement strategic marketing decisions and adjustments in real time?
- Can we develop the talent and resources to harness big and small data to provide strategic insights?

Marketers need a methodology and delivery model to address the deficiencies articulated above and to allow them to answer their key questions.

We believe that solution is Ncyte.



So, what is Ncyte?

Ncyte is Deloitte’s powerful managed analytics solution for helping companies make smarter sales and marketing decisions across all channels, media and customer segments. It is software, insight and strategy all in one service. Using patented algorithms, proprietary data models and predictive analytics, Ncyte delivers actionable insights companies can use to acquire new customers more efficiently and capture more value from each ongoing relationship.

From customer interactions to cross-selling tactics, from social media to traditional advertising, from mobile apps and web banners to in-store flyers and promotions, Ncyte provides solutions to the marketer’s key challenges.

Integrated data methodology, data visualization forecasting and planning functionality support strategic decision making that helps you get smarter, faster.

Ncyte consists of three major parts:

1. The Ncyte data model
2. Visualization
3. Baselines – a different spin on predictive analytics.

The Ncyte data model

The Ncyte data model (Table 1) has been designed to meet many key marketing challenges – and resolve many of the deficiencies found in other solutions.

Table 1 – Ncyte data model explained

Need	Description
1 Integrate marketing silos	Provide a vertical and category-agnostic solution that captures all detailed marketing events and downstream performance.
2 Historical marketing record	Provide a complete historical record of all marketing activities.
3 Time series	Store and treat all data in a date-stamped time series to facilitate visualization and econometric modeling.
4 Data inclusivity	Incorporate all data – internal sources, third party demographic, competitive, offline, online and unstructured.
5 Data familiarity	Use dimensions and measures relevant to the marketer while using a common data model and code base for all.
6 Prompt solution delivery	Leverage a simplified ETL and proprietary file format for marketing data. New services can be up and running in 80% less time than competing solutions.
7 Statistical model integration	Integrate with third-party or open-source statistical modeling, gaining efficiencies from the collection and aggregation of data.
8 Refresh frequency in near real-time	Data can be refreshed and updated frequently to make learning and strategy an ongoing exercise.

Events

The data model strategy is based wholly on the concept of a planning event and represents the central entity in the model. Ncyte is designed to emulate what marketers do – namely, create and manage real marketing “events.” Most marketers capture their marketing activities in spreadsheets, but with Ncyte, they are able to define and capture performance as well. Marketing performance can be sales, web clicks, store visits, call center calls, brand

awareness metrics, social media mentions, and nearly anything else. Using Ncyte, a marketer can gain unique insight into spend and performance and a full view into customer responses to marketing plans.

In order to capture any organization’s unique marketing ecosystem, Ncyte classifies events in one of three ways, as illustrated in Table 2 below.

Table 2 – Defining marketing event

Event type	Example	Visualize trending	Associated spend	Tracked performance	Baselines
1 Attributed campaign performance	Email campaigns	Yes	Yes	Yes	Yes
2 Brand and media awareness	Brand investment	Yes	Yes	No	No
3 Unattributed performance	Sales performance	Yes	No	Yes	Yes

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To categorize their marketing ecosystem, we take organizations through a process called data amnesty. All of the organization's data goes on the table, and we ask:

- What drives the business and where does marketing play a role?
- What are the Key Performance Indicators tracked by marketing?
- How and where do they spend their marketing dollars?
- What data systems are used for each type of data?

This discovery process will lead to the data model taxonomy. For example, a real financial services institution's (FSI) information produced the following three definitions:

1. **Acquisition campaigns** – Direct mail campaigns sent to potential customers with a direct call to action. Performance was captured in a CRM system. These are attributed campaign events.
2. **Branch** – The branch channel captures the performance of customers walking into a bank branch to purchase a product. There is no direct connection between a marketing event and the customer. Branch events are an example of unattributed performance.
3. **Media campaigns** – These are awareness campaigns. The organization has invested in advertising to drive awareness of the brand. There is no downstream performance.

Capabilities

The event-based design serves a number of purposes:

- Past events represent a granular historical record useful for ongoing reporting and analysis.
- Baselines can be generated using patented Ncyte algorithms for attributed and unattributed performance events.
- Events can represent future marketing plans with forecasts of potential performance.



Visualization: The analyst knows best

Further examination of the same FSI case shows how Ncyte can visualize marketing performance and uncover insights. The Ncyte platform has a unique technology that allows an analyst to interact with the data easily, visually and with the greatest degree of flexibility.

For example:

1. An analyst can see how all directly attributed campaign investments (blue bars) drove the acquisition of new customers (red line).

Graph 1 – Viewing acquisition campaigns and performance

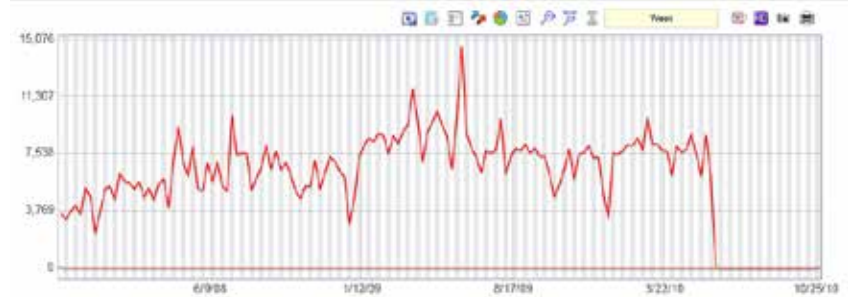
Acquisition campaign (Nov 1, 2007 – Nov 1, 2010)



2. Next, the analyst investigates branch channel performance. These are unattributed so there are no associated investments.

Graph 2 – Viewing branch channel performance

Branch (Nov 5, 2007 – Nov 1, 2010)



3. Adding in media and brand spend (yellow, purple and green bars) completes the view. The analyst can now search for relationships between marketing investments and performance.

Graph 3 – Complete marketing performance

Total (Nov 1, 2007 – Nov 1, 2010)



Ncyte forces the analyst to connect causes with effects in the search for marketing performance. This rich visual toolset helps an experienced analyst gain insights and form hypotheses without having to resort to mathematical modeling. With Ncyte providing the visual cues, the marketing analyst does know best.

Baselines: A different spin on predictive analytics

Once a client’s marketing history has been categorized within the event model, rich behaviour patterns can be illustrated by a number of patented curves:

- Performance curves for time series response patterns
- Seasonal and fiscal year response patterns
- Day-of-week response patterns
- Multi-year (and multi-fiscal period) trending patterns.

The aggregation of these response patterns produces a full baseline of behaviour for a period of time, allowing us to ask unique questions of the data.

Again looking at our FSI case example, we are able to overlay performance baselines on any chart at any level of granularity to compare actual vs. baseline performance. The analyst’s goal is to find periods of variance.

Graph 4 – Using Ncyte baselines to spot variance in acquisition campaign performance

Acquisition campaign (Nov 1, 2007 – Nov 1, 2010)



For the above acquisition campaigns, there was a clear performance-over-baseline variation in the beginning of the year. The analyst should now drill into that period of time to discover more about those campaigns. What drove the over performance? Was it the product offer or external economic factors?

Graph 5 – Using Ncyte baselines to spot variance in the branch channel

Branch (Nov 5, 2007 – May 31, 2010)



Branch performance has a considerable variation from the baseline.

Graph 6 – Using Ncyte baselines to see a complete view of all marketing investments

Total (Nov 1, 2007 – May 1, 2010)



Putting all of this together with the media campaigns shows the whole story. The analyst has reason to hypothesize that the extra media spend drove the performance variation.

Finally, marketing mix modeling and other advanced analytic inquiries is easier with Ncyte: the data is already cleansed and normalized into a time series. The data model allows for easy and frequent refresh, so these exercises can be done on command or whenever business sense suggests. By combining the power of Ncyte with advanced analytics, marketing departments can be more proactive in managing their budgets and achieving performance targets.

Finally, marketing mix modeling and other advanced analytic inquiries is easier with Ncyte: the data is already cleansed and normalized into a time series. The data model allows for easy and frequent refresh, so these exercises can be done on command or whenever business sense suggests.

Ncyte:

An ongoing strategic offering

From change management to analytical services

Ncyte is not a point-in-time solution. Other vendors have a narrower focus, such as:

- Selling issue-specific technology or software
- Making one-time media mix recommendations
- Providing periodic market research.

With Ncyte, Deloitte can deliver insight and strategic advice on an ongoing basis through a managed service.

These services include:

- Workshops to help companies understand their own marketing data and ecosystems
- Change management to help companies develop a more data-driven culture
- Cost-effective and securely hosted software easily accessed through a browser (Software as a Service – SaaS)
- Data management services to transform and visualize client data on a regular and ongoing basis
- Advanced analytical services and strategic marketing planning services, including:
 - Quarterly, annual marketing planning support
 - Product launches
 - Marketing mix models
 - Market opportunity assessments
 - Customer strategy
 - Trade spend analysis
 - Competitive impact analysis.

Quantifying the benefits: A case in point

A consumer packaged goods company couldn't understand why it was losing share during a period of traditionally strong performance. Some speculated that a cut in media advertising was responsible for the decline. Leadership, however, wanted to understand the impact of all marketing activities, including retail promotions, online, social media, sponsorships and competitive activity.

The marketing team was not able to collect data from multiple sources and hence could not defend its strategy. Using Ncyte, Deloitte analytics helped the company execute a comprehensive customer performance strategy, incorporating the competitive landscape, product mix, channels, messaging and an improved marketing mix.

After implementing our recommendations, the company saw a 3.5% increase in sales in a declining market, resulting in over \$2.5M in sales.

Helping marketers fulfil their mandate

Ncyte is Deloitte's powerful managed analytics solution that helps companies make smarter sales and marketing decisions across all channels, media, and customer segments. Using proprietary data models and a patented algorithm that enables predictive analytics, Ncyte delivers actionable insights to help engage customers in an efficient and meaningful way and to capture more value from each relationship.

From customer interactions to cross-selling tactics, from social media to traditional advertising, from mobile apps

and web banners to in-store flyers and promotions, count on Ncyte to get smarter faster.

At the heart of Ncyte is proprietary software that measures connections between sales and marketing, customer performance, and profitability. But with its built-in layer of advanced analytics, Ncyte does even more. It delivers automated scenario and predictive modeling to support prescriptive decision-making about marketing mix, pricing, channel management, and customer strategies.

The result? Smarter choices, and the confidence of knowing your sales and marketing investments are on the right track.

Our team

John Wylie

Manager, Financial Advisory

jowylie@deloitte.ca

416-775-8537

Adrian Borys

Manager, Financial Advisory

aborys@deloitte.ca

416-874-3268

References

1. IBM Institute for Business Value, 2011, "From Stretched to Strengthened: Insights from the Global Chief Marketing Officer Study", Somers, NY, U.S.A
2. EMC, 2011, "Data Science Revealed: A Data-Driven Glimpse into the Burgeoning New Field", Hopkinton, Mass., U.S.A.
3. Paderni, Luca S., Q3 2011, "The Forrester Wave™: Marketing Mix Modeling", Forrester Research, Q3 2011
4. Cutten, C., and MacMillan J., Deloitte Consulting LLP., CMO Council, "Marketing Outlook 2011"
5. IBM, Op. cit.
6. Brosnan, Robert, "Revisiting The Enterprise Marketing Software Landscape", Forrester Research, February 2012
7. Paderni, Luca S., "Manage Your Marketing Mix Modeling Vendors", Forrester Research, January 2013

Figure 1 – Forrester - January 2013 "Mix Art And Science For Marketing Success" –
The Marketing RaDaR Model Supports The Entire Customer Life Cycle

Figure 2 – IDC, EMC

Figure 3 – IBM – CMO Report – 2012 From Stretched to Strengthened

Figure 4 – Forrester – December 2012 "Predictive Analytics Revolutionize Marketing Mix Planning" –
The Marketing Mix Modeling Landscape

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