Quality brand growth in the age of disruption

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Executive Summary

- Businesses and consumers are experiencing exceptional volatility built on the back of the COVID-19 pandemic, consumer demand shift, and the digital transformation of the global economy. This volatility is rapidly advancing the need for brands to understand the effectiveness and impact of commercial investments.

- The science around marketing effectiveness has made significant progress over the past decade, with several advanced statistical techniques developed to measure the impact of marketing investments. However, the primary obstacle to constructively using these techniques is a lack of organised and connected datasets.

- Organisations have access to more data than ever but struggle to combine and analyse that data to make high-quality and timely decisions (the 'digital knowledge paradox'). Lower volume, higher complexity strategic and tactical decisions are most affected.

- Key technologies, such as knowledge graphs and digital twins, that effectively combine, analyse, and model varied datasets now exist and will be the 'new normal' of future decision-making.

- Investment in advanced analytics such as artificial intelligence (AI) and machine learning (ML) has also rapidly increased, with winning organisations investing in technology, capability building, and data acquisition.

- There are four main actions brand executives can take to best position their organisations going forward:

  1. Catalogue data and insights, including granularity, gaps, and duplications.

  2. Align cross-commercial (marketing and sales) KPIs and define how these KPIs are measured and attributed.

  3. Invest in flexible technology that can provide a single source of truth across multiple functions and areas.

  4. Encourage early-career collaboration between marketing, sales, and technology functions.

Foreword

The 2020s are an inflection point for brand marketing. The digital, data and analytics revolution of the preceding two decades has unlocked new ways to build brands and understand the effects of marketing efforts. For brand owners, this creates opportunities for disruptive growth, as well as risks of being left behind. Realising these opportunities requires targeted investment through scientific approaches to measuring marketing return on investment, along with optimization of other corporate functions (operations, supply chain, human resources, etc).

In conversations with senior executives across industries, the IPA and o9 Solutions have learned that many organisations struggle to realise the full benefits of digital-age brand-building capabilities at global scale despite having more data than ever

before—what has come to be known as the 'digital knowledge paradox.'

This paper, developed in partnership between the IPA and o9 Solutions, tackles this 'digital knowledge paradox' by providing insights into some of the key digitally-enabled capabilities and practices that will underpin success for the next generation of effective brand-building organisations.

This paper aims to help senior leaders steer their organisations to effectively leverage these capabilities and set up processes to capitalise on growth opportunities in the coming years. Key sections include examining brand growth across time horizons, connecting the dots between marketing and sales, and discussing the 'how to' in bringing everything together in a digitally-enabled,

knowledge-powered decision-making ecosystem. Underpinning the proposals in this paper is a clear need for organisations to shift to a holistic, connected approach for top-line growth management by breaking down longstanding barriers between commercial functions, ultimately combining insights and data to understand the short- and long-term financial value of every key commercial decision.

Janet Hull OBE
Director of Marketing Strategy,
Institute of Practitioners in Advertising

Adam Ben-Yousef
Vice President, o9 Solutions

Context: Marketing effectiveness in an age of disruption

Businesses and consumers are experiencing a period of exceptional volatility. The concept of VUCA (volatility, uncertainty, complexity, ambiguity) was coined at the tail end of the Cold War and has become increasingly relevant in organisational strategic leadership thinking following the 2008 financial crisis. A central characteristic of a high VUCA environment is unpredictability, often manifesting as difficulty establishing clear cause-and-effect chains after major market developments.

Today, organisations and consumers are experiencing three major simultaneous disruptive dynamics that often interact in unpredictable ways:

- Supply chain shock (principally caused by the COVID-19 pandemic and other large-scale geopolitical events)

- Rapid consumer demand shifts (both as a reaction to supply shocks and behaviour changes)

- Digital transformation of the global economy

Disruptive interactions include the rapid return of high inflation to many developed economies, acceleration of the long-term retail channel upheaval, and staffing imbalances across several industries.

This volatile landscape will lead to ongoing changes in consumer response to marketing. The initial introduction of digital-based marketing channels revolutionised how and where brands can reach consumers, though by the late 2010s, digital-based marketing had consolidated around a small number of scale providers (mainly Google and social media players). Consumer purchase shifts towards digital channels were also on a stable trend, so in most developed markets, there was finally a sufficient time series of stable consumer data such that behavioural responses to marketing had become relatively predictable (albeit with accuracy highly dependent on industry/product type).

There has never been a more critical time for brand owners to invest in understanding which activities genuinely drive quality growth for their business.

However, recent disruptions to consumers' lives have led to widespread changes in significant life choices (e.g., turnover rates are running at record highs in many major economies) and purchasing behaviour. At the same time, whilst digital-based purchase channels have benefitted from a structural acceleration versus pre-COVID levels, data collected from digital channels have become increasingly scrutinised. Legislative action (such as the EU's General Data Protection Regulation) and market-leading company action (like Apple's app tracking options) have increased awareness of consumer privacy issues in digital marketing.

Privacy concerns and third-party cookies phaseout present a challenge, prompting a focus on zero-party data (shared directly by the consumer to the brand), first-party data (collected by the brand about the consumer), and data partnerships (typically through syndicated purchase/panel data or cohort-specific analyses from the likes of Google). These dynamics will likely impact marketing effectiveness as new tactics are developed and campaign data is (re)consolidated. There has never been a more critical time for brand owners to invest in understanding which activities genuinely drive quality growth for their business.
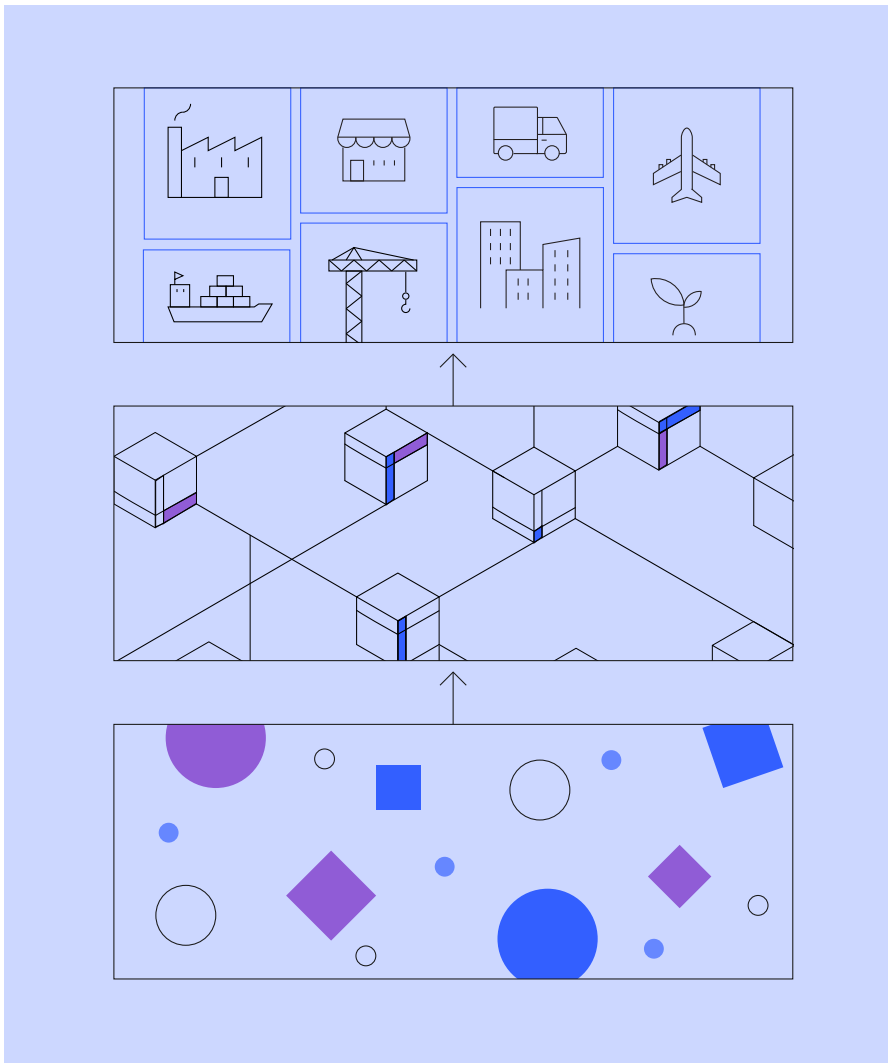
Even before the current age of disruption, many leading organisations had sought to better understand the effectiveness of their marketing investments. The initial digital marketing revolution led to a rapid expansion in the possible activities marketers could select to promote their brands. For brand organisations that control the end consumer transaction, digital marketing offers a high level of performance transparency. For brands selling to consumers via intermediaries, however, data limitations still blur the effects of investments.

Additionally, from the boardroom perspective, there was a need to temper the upward budgetary pressure that 'more places to invest in' created against a subdued macroeconomic environment in developed markets (and a potentially overheating one in emerging markets). This requirement caused more common intersecting issues for Chief Financial Officers and Chief Marketing Officers. Today, most large brand organisations have some variation of a 'marketing effectiveness' team whose purpose is to provide data-driven insight and investment recommendations.

Measuring the effect of marketing effectiveness

The science of measuring marketing effectiveness has made significant progress over the last decade and, under the right conditions, can provide deep insight into the return on marketing investment. The triple factors of increased investment in analytics, greater data availability, and shifts to cloud computing have facilitated this change. However, there is not, as of yet, one perfect unifying technique for measuring payback from marketing. Consumer marketing with long-term effects (those contributing to memory structure formation) and short-term effects (e.g., immediate reactions to a 'flash sale' promotion email) require different analytical techniques. Measuring the impact of marketing channels that affect different points in the purchase cycle in an 'apples-to-apples' comparative way is not trivial, and can cause churn and delay in quality decision-making for marketing investments.

One fundamental principle that does hold across all marketing channels is that the quality of insight on performance is highly reliant on the quality of data capturing the dependent variable (most often consumer sales for branded businesses). The different measurement methodologies available all have certain advantages and disadvantages across:

- Interpretability: What is the real relationship between marketing and sales?

- Scalability: Can the models incorporate both aggregated and very detailed datasets?

- Synergy: Can a distinct impact from ALL—both on- and off-line—marketing channels be measured?

- Optimisation: What is the ideal spread of investment across brands and channels?

Typical statistical methodology of analysing marketing effectiveness

For readers less familiar with how the effects of marketing are measured, a summary of essential methodologies is provided below.

Linear Regression (Figure 1.1):
The most traditional approach for marketing mix modelling establishes linear relationships between dependent variables (typically sales) and specific marketing levers on a per-lever basis.

- Produces quick causal relationships between marketing stimuli and sales (i.e., how will my sales increase as I keep increasing my marketing spend?), but can overstate impact

- Provides no means to quantify the indirect relationship between marketing channels and measured incremental sales within those channels

Mixed-Effect Regression (Bayesian Shrinkage) (Figure 1.2):
An extended form of linear regression designed to work well with panel data. This method can be more advantageous with large datasets at multiple levels of granularity by inferring cross-level trends and smoothing global and group-level characteristics.

- Runs efficiently across multiple granularity levels, capturing variations in responsiveness without having to run models individually for each level

- Cannot be tuned for confounding random effects not captured in the data and can misattribute effects to measured data as panel data complexity increases
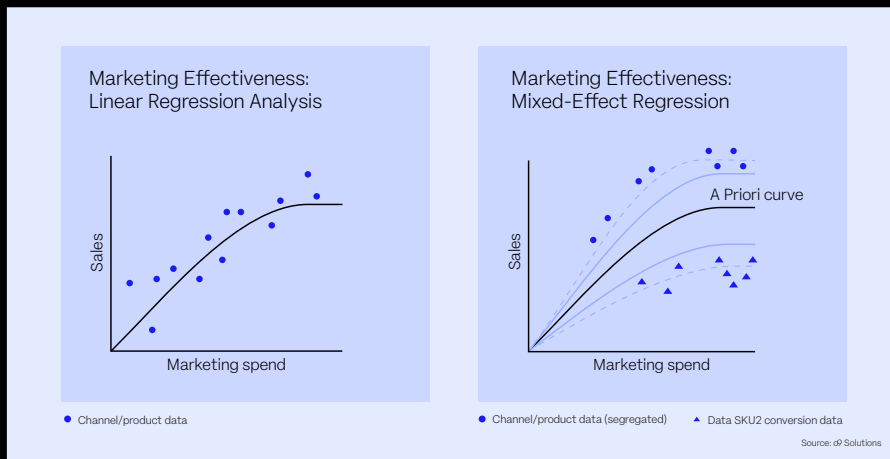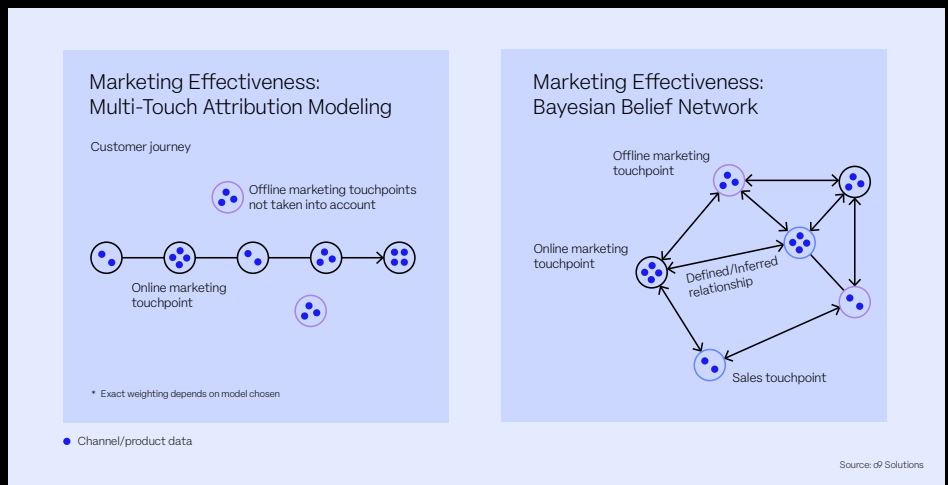

Figure 1.1

Figure 1.2

Figure 1.3

Figure 1.4

Multi-touch attribution modelling (Figure 1.3):
Aims to attribute each online purchase to touch points along the buying journey. This method has been widely promoted by the digital advertising industry and includes a family of heuristic approaches. Multi-touch attribution reviews user journeys and breaks them down into individual touchpoints to understand which most impacted the customer's buying decision (a promotional email, a website visit, an online newsletter, etc.).

Commonly used algorithms include:

• Last-touch attribution
All the credit is given to the last touch point/channel before the conversion, with the rationale that it is the touch point that closes the deal with the customer.

• First-touch attribution
All credit is given to the first touch point/channel, with the rationale that the first touch was the catalyst for the ultimate purchase decision.

• Linear attribution
Equal weighting is given to each touch point and channel for customer interaction.

• Position-based
Positioning the first and last touches as most important, this model assigns 40% weight each to the first and last touch whilst dividing the remaining 20% of the impact amongst the others.

• Time decay
This algorithm gives the most significant portion of the weight to the most recent touch in the conversion cycle, with each preceding touch receiving a proportionally lower weight depending on the amount of time that has passed since the prior touches.

• Markov Chain
This model algorithmically assigns weight to each touch point by calculating the loss in the purchase probability when that touch point is removed from a journey.

Whilst multi-touch attribution models are easy to implement and explain with limited 'black-box' style analytics, they are limited to measuring solely online journeys without considering how a customer might have interacted with offline media and other factors (loyalty, baseline sales, etc.).

Bayesian Belief Network (Figure 1.4):
Allows various advertising channels to be captured in the form of a 'network', which then learns the shape of the relationships between channels (e.g., parent/child pair), as well as the scale of the relationship (e.g., responsiveness). This method aims to capture the relationship between marketing drivers and sales, as well as latent impacts from online/offline media and cross-channel interactions.

It is becoming ever more critical to develop models that can adequately leverage and connect aggregated datasets with very detailed ones.

Each analysis approach has its inherent nuances, often relating to the ability to derive insights for datasets containing multiple granularity levels. With a further blending of online and offline worlds through virtual reality marketplaces, it is becoming ever more critical to develop models that can adequately leverage and connect aggregated datasets with very detailed ones (e.g., cookie level).

The Bayesian Belief network approach currently provides the closest approximation to a holistic marketing performance measurement methodology: it considers mass media and digital inputs, calculates the synergy among media vehicles, and enables a flexible analysis of web-related data. However, other measurement techniques remain relevant in specific situations and can often be helpful in data-constrained environments or as part of a holistic strategy.

The digital knowledge paradox that is holding back brand growth

Many organisations that predate the digital revolution of the last 20 years struggle to translate data into actionable knowledge and insight on time.

The 'digital knowledge paradox': More available data from more sources does not equal more knowledge.
Availability of customer data, in particular, has exploded. The Customer Data Platform Institute today measures 161 global customer data vendors with 15K+ employees, up from 18 vendors and barely more than one thousand staff in 2016. Despite having more data than at any time in their history, many organisations that predate the digital revolution of the last 20 years struggle to translate this data into actionable knowledge and insight on time.

Immense investment has been made into data, analytics and technology over the last decade.
With the escalation in data availability, spending has skyrocketed: the $50bn global data market has grown 20%+ annually over the prior five years. That said, data privacy requirements and distrust have driven a shift away from third-party cookies (one of the most consistent sources of consumer tracking), increasing the difficulty for brands to get closer to their consumers at the point of a purchasing decision. To counter this effect, most CMOs (over 88% as reported by the BCG & Forbes CMO Insights Survey) plan to

Spend on Marketing-Related Data, 2017-2021

Data market size in USD billion

Source: OnAudience

Figure 2

invest in first-party data capture and management, with first-party data driving an expected 1.5-3.0x uplift in revenues. Yet to date, only ~20% of companies have a clear strategy to fully close data gaps, as noted by BCG in its Measurement Done Right study. Siloed functions have conflicting technology, tools, processes, and incentives. IT-led attempts to bring information into single, common data lakes have failed to translate into cross-departmental, usable knowledge as connectivity/relationships between different sources are not effectively mapped. Each department has invested in tools and systems to solve their narrow needs, which usually results in disconnected data environments.

Hence, few brand organisations have succeeded in building agile, relevant, and scaled capabilities to measure and inform their marketing and commercial investment choices. Where functions such as supply chain management have 'on-time-in-full' metrics that can be used to drive and evaluate decision-making at granular levels, commercial functions must

make do with estimates of revenue or margin generation given investments at the organisational, brand, customer and product level. As Amy Gallo of the Harvard Business Review notes in her conversation with Jill Avery:

"It's often difficult to decide which expenditures to include. For example, do you include just the cost of the media, or do you also include the investment of staff time to create the ad? [...] That challenge, however, pales in comparison with the difficulty of measuring incremental financial value. "

For many organisations, establishing a sales baseline to compare results versus expectations is itself a nearly impossible task, due to the many factors affecting sales. And marketing investment impact may not be reflected in sales for months—or even years—after the spend, which often makes marketing ROI a form of art rather than science.

Reducing the number of filters and reporting 'noise' between actual on-the-ground results and decision-makers leads to significantly higher quality decisions.

Brand growth is intrinsically linked to the brand owner's strategic, tactical, and operational investment decisions, with the right decisions at the right time having a profound effect on organisational performance. Breaking down commercial investment choices into relevant timelines is a practical first step toward higher-quality decision-making and hence more profitable and productive for brand growth:

- The strategic level focuses on long-term health and growth and sets major multi-year targets—here, typical decisions made are regarding portfolio prioritisation and subsequent resource allocation.

- The tactical level concentrates on factors that will enable winning in the immediate term (i.e., the next fiscal year) with customers. It traditionally includes such items as promotion, assortment, and innovation.

- The operational level addresses in-flight management and effectiveness. It often ends up being owned by accounting and reporting functions that produce results far after the period in which decisions can be made to effect change—leaving very few options on the table to correct in-year trajectories.

Breaking down commercial investment choices into relevant timelines is a practical first step toward higher-quality decision-making and hence more profitable and productive for brand growth.

In recent years, the most significant strides have been made in operational decision-making platforms (e.g., measurement and optimisation of digital ad spend within individual platforms), where investment choices are tightly defined (Figure 3). These decisions are typically transactional and high volume in nature but relatively simple choices to make. Leading organisations are implementing commercial systems of records with performance tracking/ diagnosis that can proactively suggest gap closure opportunities and, critically, these systems are monitored and used by commercial teams rather than operational or financial teams. Reducing the amount of filters and reporting 'noise' between actual on-the-ground results and decision-makers leads to significantly higher quality decisions: not only is the team responsible for the relevant decision one of the first to understand the need for such a decision, but also the other relevant teams, such as those from finance, can weigh in on actual actions (instead of the usual case of prolonged infighting about interpretation of in-market results).

Brand Growth Decision Hierarchy

Volume   Complexity

Strategic

Long term with significant
downstream effects
Example: Budget allocation across brands
Lower volume, highly complex decisions

Tactical

Medium term with
brand-building implications
Example: Promotion plans at key accounts
Lower volume, highly complex decisions

Operational

Short term to accomplish
specific tangible goals
Example: Optimisation of digital ad spend
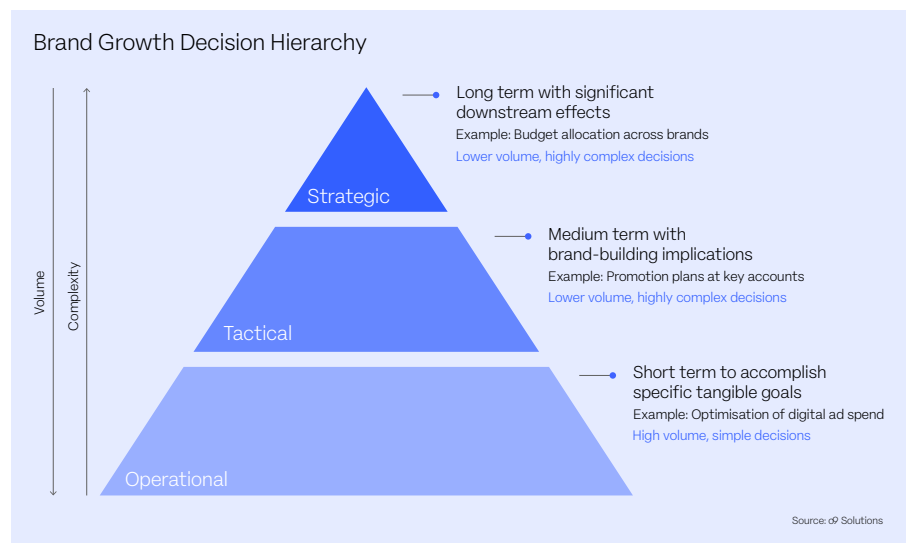High volume, simple decisions

Source: o9 Solutions

Figure 3

For strategic and tactical decision making, the picture is much less clear-cut. Most analytics capabilities effectively run on a 'batch' process (analysing specific groups of data at defined timelines), creating significant insight latency. Lower volume, higher complexity decision needs coupled with shifting requirements over time are causing organisations to 'leave money on the table' and risk longer-term brand health and growth by concentrating on short-term profit targets. Until the end of 2019, most organisations realised this challenge, but did not feel an urgent need to act on it. With COVID-19 disrupting the norms of how consumers interact with brands, acting on "what is happening now" is ever more important, and organisations are looking for ways for advanced analytics—a mix of available consumer data and clever algorithms—to help them.

Why a connected knowledge-led approach to growth will shape this decade

In a volatile external environment, strategic and tactical investment choices take on even greater importance. When volatility occurs, functions within an organisation usually first react to solve immediate needs. They seldom think about other functions within the organisation or how their decisions will impact the rest of the organisation going forward. Take a sales rep during the COVID-19 pandemic for example: having her bonus tied to outdated performance metrics and thinking about how to achieve fiscal year sales numbers, even if doing so means financially starving some of the brands or giving away too much margin via heavy promotions or price reductions. Siloed environments with high pressure and low data lead to lower-quality organisational decision-making, as few (or even none) can see the entirety of the organisation and predict the overall impact of those decisions.

Organisations that cannot consistently convert data into high-quality knowledge make significantly lower-quality investment decisions. Knowledge must be accurate and relevant to be used by decision-makers, which requires the right data in the right format at the right time. Additionally, data needs to have proper granularity (measured or calculated with advanced analytics), as forcing datasets to the lowest common denominator and 'creating' granularity just to fill in a spreadsheet causes 'false-precision' problems, drastically decreasing the value of investment decisions.

For example, consider a marketing campaign for 'ChocCo' branded chocolate and a specific on-shelf promotion for 200g bars: the promotion will benefit from a SKU level understanding, whilst the marketing investment would benefit most from the SKUs within the brand. Both initiatives would leverage the same dataset, but artificially dividing the full ChocCo marketing investment into individual SKUs, such as the 200g bar, would create more pain than benefit for the organisation. Doing this right will bring balance between the long- and short-term goals.

Many companies are already embedding a variety of advanced analytics within their organizations, though to mixed effect. Current discourse around advanced analytics is centred around AI and ML for good reason: as noted by McKinsey's annual survey on AI adoption, by 2021, 56% of all respondents have reported AI adoption in at least one function, up from 20% in 2017. However, adoption is different from impact: one major brand leader notes that he has over 1,000 people in his data science function, but is unsure exactly of what they do or how their work affects decision-making.

The missing link in effective AI/ML-influenced decision-making is the availability and quality of organisational data. AI/ML cannot effectively function without strong sets of so-called 'training' or 'base' data, and many implementations of advanced analytics put the cart before the horse by building out solutions with low-quality or missing data. As the saying goes, the best time to plant a tree was a decade ago; the next best time is today. For brand organisations, the applicable lesson is to gather data before the exact use is specifically known. This flexible approach toward knowledge build-up is an oft-dismissed critical step along the AI/ML journey.

As AI matures, its utility will be defined by the quality of organisational knowledge that it can plug into. Organisations that build an advantage in turning data into knowledge will reap disproportionate advantages in the age of AI. Customers nowadays expect hyper-personalised engagement and augmented experiences from the brands they follow and like, and over the last few years, markets have witnessed robust, well-known brands taking major stances in community connection and sustainability. Whilst today, the most relevant examples tend to be in the technology space, even more industries (particularly consumer-facing ones such as consumer goods, retail, and transportation) are racing to most profitability connect and use their vast knowledge bases.

For brand organisations, the applicable lesson is to gather data before the exact use is specifically known.
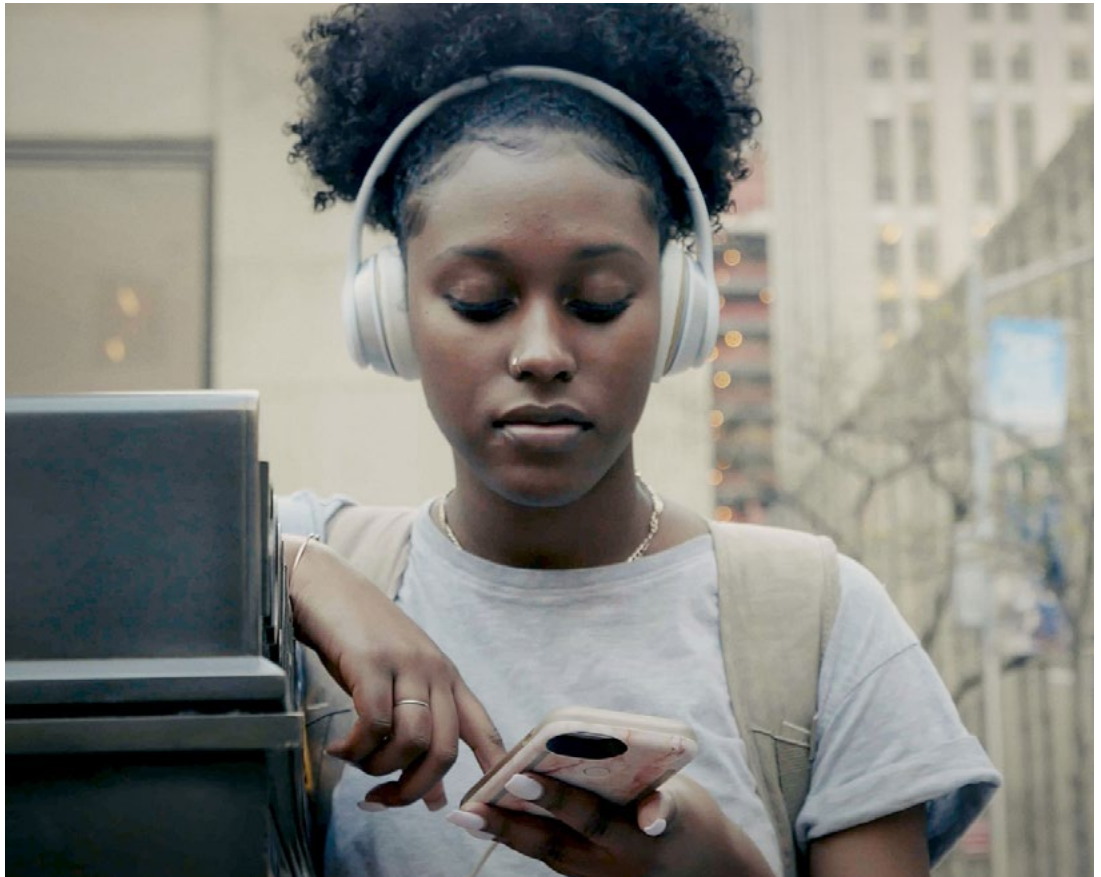
The following three chapters outline three of the most important enabling capabilities for every brand organisation to invest in now to ensure success in the future. These recommended capabilities reflect years of practitioner experience and interviews with senior executives from some of the world's leading brand businesses. Investing in these capabilities now will position organisations to truly leverage the power of AI when it becomes able to fully address complex, open-ended business decisions. Through these capabilities, organisations can adapt their decision-making and investment processes to take advantage of emergent consumer-facing disruptive technologies (such as the metaverse).

Capability area #1: Measuring the long and the short of it. Properly.

Different brand growth levers affect consumers differently across different time horizons. Whilst it almost goes without saying, it is worth reiterating this point in the context of future capabilities needed for sustainable brand growth. The typical array of growth levers available to a brand owner, such as media, pricing, promotions, activation, and innovation, have significantly different impacts on consumer recall, brand volumes, and profitability over time.

A typical example of a brand growth effect is observed with price promotions (or discounting) on consumer products, as a temporary reduction in the price of an established product will often drive a short-term increase in volume sold. The volume sold at this lower price will naturally provide the brand owner and/or retailer with a lower profit per unit, and this tool is often used to recruit new consumers to a brand by lowering the barriers to trial, leading to greater penetration in the long term. Hence, as a growth tactic, it can provide a far more immediate response than slow-burn awareness-building media campaigns. However, this comes at the cost of reducing the unit profitability for a brand's existing consumers, who would likely have purchased at full price.

Deployed selectively, the promotions growth lever benefits in encouraging recruitment usually outweigh the short-term costs, yet many brand owners find themselves deploying this lever frequently. All brand consumers, including light buyers, become trained to expect lower prices and adjust their purchasing patterns accordingly, with the result being a not uncommon situation for brands to sell most of their total volume at some discount. This outcome reflects significant destruction of long-term value (usually measurable in profit) in return for the short-term gain (usually measurable in volume).

There is no universal formula for the right combination of growth levers for a brand or product, especially at different points in its life cycle. However, any effective growth strategy should start by understanding how different levers affect consumers on different timescales. As has been demonstrated by academics such as Byron Sharp, recruitment is a key imperative for brand owners, and analysis has shown that light buyers contribute most of the brand volume in most consumer categories. The contention of this paper is that this recruitment must be delivered in a sustainably profitable way if long-term brand success is the goal. Therefore, brand owners and managers need to thoroughly understand the short- and long-term effects of different growth levers.

At a macro level, short-term cuts to marketing investment have been proven to diminish growth over the medium-long term. For example, Binet & Field's work has shown empirically that short-term cuts to marketing investment tend to result in a significantly lower medium- to long-term performance. This work has been widely shared and adopted within the marketing industry.

So that observation provokes the obvious question: Why do marketers often end up on the defensive, trying to justify the brand investment? The hypothesis of this paper (based on experience with industry practitioners, advisors, and operators) is that several related factors are at work:

1. Underlying mechanisms by which marketing builds consumer memory and decision-making structures are not well understood both inside and outside the marketing community

2. Lack of consistent, repeatable approaches to the measurement and evaluation of the longer-term effects of marketing

3. Perception deficits in the boardroom, where marketing leaders' opinions on financial and investment matters are seen as less authoritative than other C-suite opinions

One of the biggest growth opportunities facing brand organisations today is understanding the short- and long-term effects of their investments at the point of decision-making. As reported by the 'Godfather of Effectiveness' Peter Field in 50+ IPA case studies covering the 2008-09 recession, the financial crisis provided numerous data points showing a divergence in performance over the following 5+ years between brands that took a long- versus short-term approach to investment. Brands that cut investment aggressively suffered steeper declines in sales and took longer to recover pre-crisis revenues.

Understanding the short- versus long-term effects of marketing investment is vital for both near-term profit stability and long-term brand health. Another recent example of the value of greater long-term investment horizons came at the start of the global pandemic: given the initial shock of channel closures and limitation of the everyday consumer movement, many brands, naturally, immediately started asking the question if now was the right time to cut or hold investment.

Obviously, in an unprecedented situation such as the COVID-19 pandemic, no model was able to produce a simple yes/no answer. But today, as the shock period recedes, a picture is beginning to emerge where the sectors that strived to maintain relatively consistent business-as-usual operations, including marketing investment levels (e.g., grocery retail, branded consumer goods), are now outperforming those where organisational brand investment shifted along with operational and demand hiccups (e.g., automotive, fashion retail, connected fitness).

The purpose of these examples is not to question the decision-making of leaders in particular organisations or industries, rather, it is to highlight the tendency for divergent brand investment behaviour to correlate with highly divergent performance outcomes on a multi-year or long-term time horizon. The ability to make well-informed, high-value, agile decisions informed by predictive insight even during a worldwide crisis is one of the most valuable capabilities any organisation can invest in for the long-term time horizon.

Not all analytics-based decision-making systems are relevant: different measurement techniques are best suited to measuring different time horizons, and leading organisations use a layered, multi-technique approach. The short-term horizon that dominates brand investment decision-making can be measured using various techniques, depending on the channel, industry, and decision. Only recently has the opportunity come for the same approach to be applied for the long term as well.

The key breakthrough for organisations to access long-term predictive insight in their decision-making is to systematise data collection, utilise post-event analytics, and create forward-looking simulation models, which yields a repeatable chain where measurement insight and forward-looking predictions can be continuously refined. Long-term analytics and modelling naturally require a longer time series of data to give meaningful results, and meaningful results are the only inputs that can increase decision-making quality. With the understanding of how marketing investments across various channels translate into longer-term returns, brands can better analyse their investment opportunities, properly compare portfolio strategy to the right 'conditions to win', correctly establish appropriate levels of budget and funding, and confidently model multiple scenarios based on varied market conditions.

One of the most effective at-scale deployments is demonstrated at a large branded consumer goods company (which must remain anonymous for confidentiality reasons). Short-term channel-by-channel consumer behavioural response to marketing is measured multiple times per year using econometric analysis, and those analyses are augmented with other more channel-specific techniques such as digital attribution. These short-term response models can be used to forecast returns from future marketing activities, even at granularities specific to a particular brand in a particular market.

The predictive accuracy correlates strongly with underlying data quality. Given that the long-term response to marketing is linked to the formation of memory structures, the company augments short-term modelling with long-term studies that measure the strength of recall generated by different marketing channels, independent of brand. Using 10+ years of historical data, the company can establish a series of marketing channel-specific coefficients that quantify how a given short-term response is likely to translate into a three-year horizon.

By role-modelling the investment questions that executives expected from their teams, leadership enabled employees to adopt the new capabilities at scale.

Measurement is only part of the challenge. Organisational culture and processes must embrace a long and short mindset in decision-making, rejecting the either/or mentality. Building the technical capabilities to measure the long and short of brand investment will produce underwhelming results without a commitment to evaluate data and improve long-term decisions from leadership downwards. Many organisations' annual performance targets and reporting cycles drive significant short-term tactical and operational bias into decision-making, often with disastrous long-term effects. Revenue-driving operating expenditure ('opex'), including marketing and trade investment, is rarely evaluated with the rigour afforded to capital expenditure ('capex'). Practicality rules out a detailed analysis of every operational decision, but the mindset that opex only exists during the year it is spent creates a culture in many organisations that struggle to meaningfully assess the long-term impacts of operating investments.

However, proper technology now exists to forecast the short- and long-term effects of different growth-driving investments. Simulations can be generated in near real-time, making analytics much more relevant for live and short-term decision-making. In turn, strategic leaders in organisations need to establish a culture that sees such analytics as the norm for every growth-driving investment. In the example given above of the organisation that successfully built a long-term measurement infrastructure, the roles of the CEO, CFO, and CMO in driving the culture shift were a major catalyst in unlocking true long-term value. By role-modelling the investment questions that these executives expected from their teams, leadership enabled employees to adopt the new capabilities at scale. Requests for additional investment that built a clear long- and short-term returns-based business case were consistently funded.

The role of leaders in driving culture and process change articulated here may sound obvious. However, in transformations, culture shift is not a trivial step: exceptional clarity of strategic vision and leadership is critical to keep an eye on the long-term when caught amongst competing short-term priorities.

Capability area #2: Connecting the dots between Marketing and Sales

Marketing and Sales continue to exist as siloed functions within many organisations, often even within the C-suite. Most typically, Sales functions focus nearly entirely on top-line revenue targets and month-by-month or quarter-by-quarter performance, whilst Marketing organises around major campaigns and new products. Thus, when Chief Sales Officers or Chief Marketing Officers set targets and goals, each can claim success on their own metrics whilst the broader commercial environment becomes muddier and less coherent to the consumer. The rise of 'super-chiefs' (Chief Commercial Officer, Chief Revenue Officer, Chief Growth Officer) is a step in the right direction to address commercial functions more broadly, but the silos of the past prove difficult to break down quickly.

Even brand language and categories/ segments can differ between Marketing N Sales. Many structural issues contribute to keeping Marketing and Sales separate, especially around data and terms used to predict the impact of commercial decisions. Marketing teams tend to focus on brand families and consumer positioning, while Sales teams look at product families and appeal to retailer customers (who, in turn, generally have a whole-category viewpoint rather than any specific brand or product). These different viewpoints mean that commercial functions often talk past each other, and consequently when full commercial plans are developed, creating a complete picture usually means painstakingly piecing together incomplete information from both sides, losing the ability to dive into granular details or roll up data consistently.

Commercial success has many parents; commercial failures are orphans. So what to make of in-market performance? Take the example of a new product that has exceeded sales targets: employees of the Sales function will speak of the hard-line negotiations that they undertook to get the product on shelf and on screens, while Marketing associates will claim that their incredible brand campaigns caused consumer interest to soar. In fact, the actual results are likely due to a combination of efforts as well as external factors (which are often conveniently ignored).

In the case of a product flop, fingers are pointed: the campaign was perfect, but Sales ignored the 'must stock' list. Or many retailers accepted the new item, but consumers did not respond to the mistargeted branding. And suddenly, external factors like 'market conditions' or 'economic momentum' seem to carry much more weight.

In the end, however, without a straightforward way to separate the noise from the data, executives are forced to make judgement calls on performance rationales based at least partially on the loudest, most convincing voices in the rooms. These decisions can create a vicious circle, where up-and-coming leaders learn to rely on subjective rather than objective methodologies for evaluating results.

Meanwhile, consumers are increasingly influenced by various micro-touches across many marketing and retail channels. Whilst the holy grail of targeted marketing is still individualised targeted advertising and promo that reaches consumers at precisely the right moment, the marketing environment continues to expand and splinter. Today, consumers are bombarded with messaging across nearly every possible front: traditional mass media, cadres of newly minted celebrity influencers, tiny banners on apps—even virtual metaverses.

Investments are increasingly made not just in the messaging and brands themselves, but also in the data for the platforms that receive those campaigns. However, the effort that goes into the design of campaigns remains stubbornly higher than that of truly understanding the data feedback—if anything, most organisations simply use cherry-picked samples to confirm the conclusions they've already arrived at, rather than asking what the holistic data can convey.

Forming a cohesive overall commercial strategy for brands will require more cooperation at more junior levels within organisations. Today, many junior employees primarily spend their days fulfilling the needs of their immediate managers—often by crunching numbers or creating reports. As data analyses and results become more centralised, just as much focus will need to be given 'across the aisle'—i.e., to their commercial colleagues—as is given up the chain of command. Instilling the joint mission of the commercial arms of organisations will be a shift, but one that will be largely enabled by technology that has, for the most part, already transformed other functions: note the intertwinement of IT, Operations, and Supply Chain over the past decades.

The rise of 'just in time' inventory combined with supply shocks means that commercial functions must coordinate more closely with operations and supply functions. Cross-functional KPIs, with often complex interactions and trade-offs, are also increasingly important. The processes of Integrated Business Planning (IBP) take on even more weight when rapid shifts are seen on both the supply and demand sides. Whilst historically, commercial functions have been the organisational trend- and path-setters, future success will depend on whole-organisation coordination.

Most organisations are at the beginning of this journey, and often do not have the cross-organisational tools to provide maximum impact. Of course, the wheel will not be re-created. As mentioned above, technological solutions have begun to be developed, and end-to-end platforms will likely be successful organisations' underpinnings—this is the focus of the next capability area.

Capability area #3: Digitally-enabled, knowledge-powered decision-making ecosystem
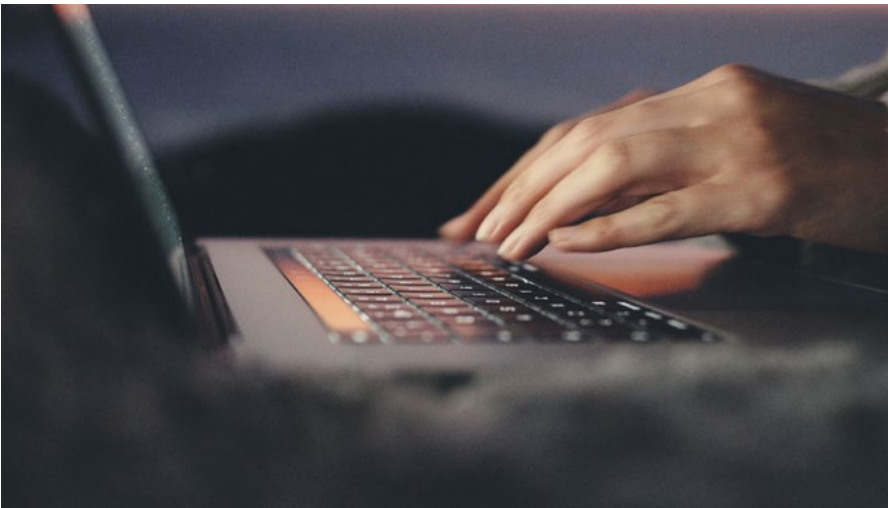
Quality growth requires data and knowledge-powered decision-making. This paper has already made the case that achieving quality growth for a brand depends on the strategic, tactical, and operational growth decisions made within an organisation. Furthermore, it has drawn attention to the digital knowledge paradox being faced by many organisations and established the need to build long- and short-term measurement capabilities across integrated commercial and marketing teams. In this section, the final capability area to be prioritised in support of a quality growth agenda is building a knowledge-powered decision-making ecosystem, which brings together the previously identified priority capabilities and resolves an actionable plan for the technical challenges faced by many organisations.

Embracing the closed decision loop—what is your 'OODA' for every decision that matters? The central concept of knowledge-powered decision-making is the closed decision loop: each action affects the overall outcome and provides more data and context for subsequent decisions in the same environment. Building upon the classic military strategic theory of the 'Observe-Orient-Decide-Act' (OODA) loop, every investment decision in a business should be articulated as a closed decision loop. The key steps at most organisations will typically be 'Track-Analyse-Simulate-Decide-Execute', with systems thinking applied to design a set of continuously operating, mutually interacting decision loops to run the business. Decision makers should have the proper knowledge at the right moments to choose between a clear set of investment options.

These concepts are not controversial. Almost all business decision-making, knowingly or unknowingly, follows some version of a closed decision loop. In practice, many of these decision loops are poorly defined: whether through low-quality data input/outputs at different steps, or disconnectedness between different systems, the result is normally a feedback mechanism that is too slow or inaccurate for effective decision-making, which places a greater burden on more fallible human judgement.

Closed decision loops are an exceptionally powerful tool for growing brands sustainably.
If designed correctly, they provide more material information, deeper insights, and advantageous responsiveness for organisations that have more effective decision loops than their competitors.

Decision loops can be applied to high-frequency operational decisions such as the inflight optimisation of a social media campaign, where there is a premium on speed of responsiveness. But they are equally, if not more, powerful when designed for complex strategic decisions, such as choosing overall marketing investment levels for a brand across different channels or markets. Such decision loops require a synthesis of heterogeneous inputs from multiple sources and have a high number of possible outcomes, and leaders who prioritise giving their top talent the knowledge and decision-making infrastructure to make smarter investment choices are positioning their organisations to succeed in the long term.

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Rigidity, complexity, and scalability challenges make this kind of knowledge-powered decision-making difficult to realise without the right technology. The need to bring together data from so many disparate sources to support multiple decision loops that run on different interacting cadences is a significant challenge. Much of the data and analytics technology from earlier generations is not suited for handling these challenges sustainably, especially when applied to strategic and tactical decisions. As such, many senior executives interviewed for this paper expressed disappointment in the results released from prior investments in data, analytics, and insights initiatives.

The future knowledge-powered decision-making ecosystem needs to directly address the three biggest challenges encountered in the past if it is to be the bedrock capability for driving quality growth in brand organisations. The first challenge is rigidity. Traditional IT or data and analytics capabilities have been built rigidly, where detailed capabilities and specifications are defined upfront.

The data inputs required and relationships between them are codified into fixed schemas, which are complex and expensive to change retrospectively. Future capability upgrades are then constrained by the early technological choices when in reality, the decision needs of a business evolve in unpredictable ways, particularly at the strategic and tactical horizons. Rigidity of technology becomes a barrier to innovation and agility.

The second challenge is complexity. Put simply, making connected investment decisions between sales and marketing levers on different time horizons, considering both short-term and long-term P&L simulations, is a highly complex problem for even one brand in one market. Beyond the purely analytical complexity of being able to trade off investment in one growth lever versus another with a 'common currency' set of measures of forecast payback, there is process complexity of different people having different roles in making decisions at different levels of detail.

Digital twins are explicitly designed to support complex decision-making processes that are expected to evolve over time.

Once again, this problem becomes most acute at the strategic and tactical decision horizons, where the biggest value opportunity lies from a quality growth perspective. There is not (yet) a magic AI answer to this challenge.

The final challenge is around scalability. Many modern brand organisations are complex multi-national matrices sourced from mergers and acquisitions, with each market having unique circumstances and data. A decision-making ecosystem needs to scale across such organisations whilst still providing economies of scale. These economies need to come both on a pure technology side by leveraging cloud-based solutions and on the enterprise's decision-making approach. Processes and solutions that force absolute conformance to one specific set of rules around the world tend to be scalable, but come at the cost of talent engagement and quality. The future solution lies in being able to tailor to local needs in the places where customisation adds the most value without sacrificing the ability to scale across markets or countries.

Existing marketing effectiveness technology ('MarTech') and other enterprise systems have prioritised creating decision loops for high-volume/low-complexity decision processes. Within the marketing landscape and more comprehensive enterprise technology, much existing infrastructure is geared toward standardisation and scalability of core operational processes. This is not to say there is a lack of technological sophistication and cutting-edge capability powering these platforms, but core operational decision processes must prioritise stability and reliability at scale. For example, buying ads on social media, purchasing/allocating supplies, or managing customer orders/invoicing are all characterised by a relatively simple decision architecture that can be codified and executed at scale.

Complex, higher order strategic and tactical decision-making is enabled by a new approach: the digital twin of an organisation (Figure 4). Marketing and commercial decisions at the strategic and tactical levels are characterised by far higher internal and external inputs interacting in complex and mutually-affecting ways. The number of decisions or events is far lower than at the operational level, but each decision has a higher financial impact.

The key emergent trend supporting brand growth in this space is the development of digital twins in organisations. Digital twins are explicitly designed to support complex decision-making processes that are expected to evolve over time. Using technology such as knowledge graphs (see Figure 4), digital twins provide organisations with a unified platform on which advanced analytics, AI/ML approaches to measurement and optimisation, and complex decision flows can be built and stored in a fluid fashion.
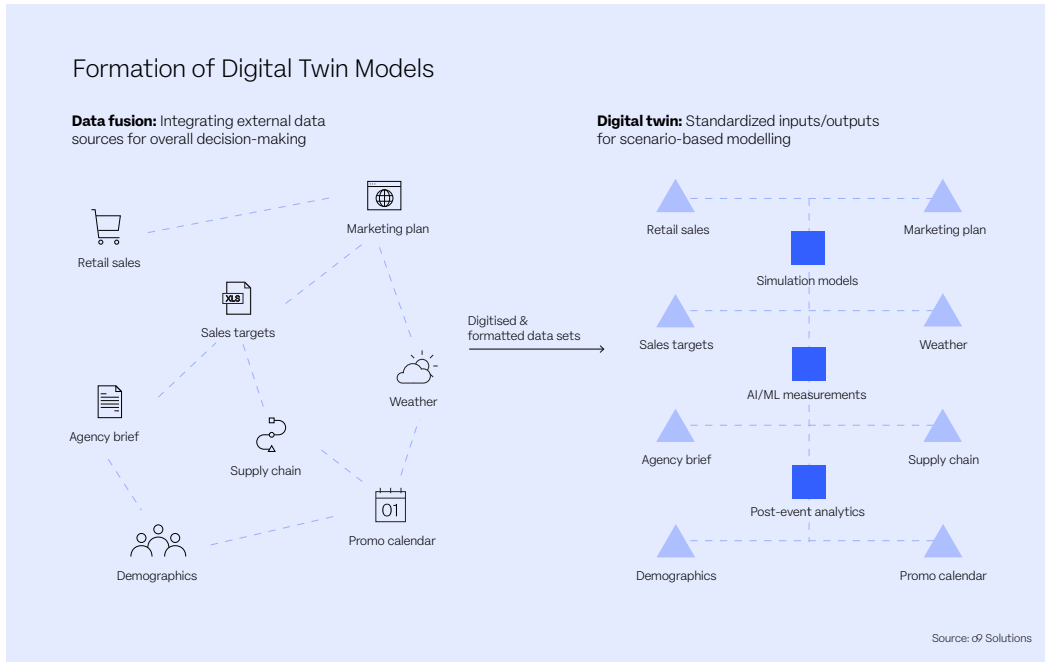
Formation of Digital Twin Models

Data fusion: Integrating external data sources for overall decision-making

Digital twin: Standardized inputs/outputs for scenario-based modelling

Retail sales

Marketing plan

Sales targets

Agency brief

Weather

Supply chain

Promo calendar

Demographics

Digitised & formatted data sets

Retail sales

Marketing plan

Simulation models

Sales targets

Weather

AI/ML measurements

Agency brief

Supply chain

Post-event analytics

Demographics

Promo calendar

Source: o9 Solutions

Figure 4

Digital twins are designed to complement the existing transactional systems of an enterprise (e.g., media buying platforms and enterprise resource planning [ERP] systems) by acting as the connective tissue between these systems, turning fragmented transactional and executional data into the connected knowledge needed to support higher order decision-making. The insight and performance advantages conferred by having a digital twin of an organisation make it likely that, by the end of this decade, they will be as central to commercial, marketing, and supply chain decision-making as ERP systems have become in managing financial transactions.

Digital twins can solve the rigidity, complexity, and scalability challenges of the digital knowledge paradox. In a traditional database or data lake structure, each new dataset must be fully mapped against common elements in others before any analytics are possible. This mastering process is often highly manual and error-prone. The rigid structure of traditional data requires all information to be disaggregated to the lowest level of detail, even when not meaningful to the specific data record. This structure drives an exponential increase in computation requirements for the complex analysis required to support strategic and tactical investment decision-making, as relationships and dependencies between datasets are not stored in a way that allows the automatic propagation of changes to the data throughout the entire database. The end result is a poor user experience and little trust in the platform.
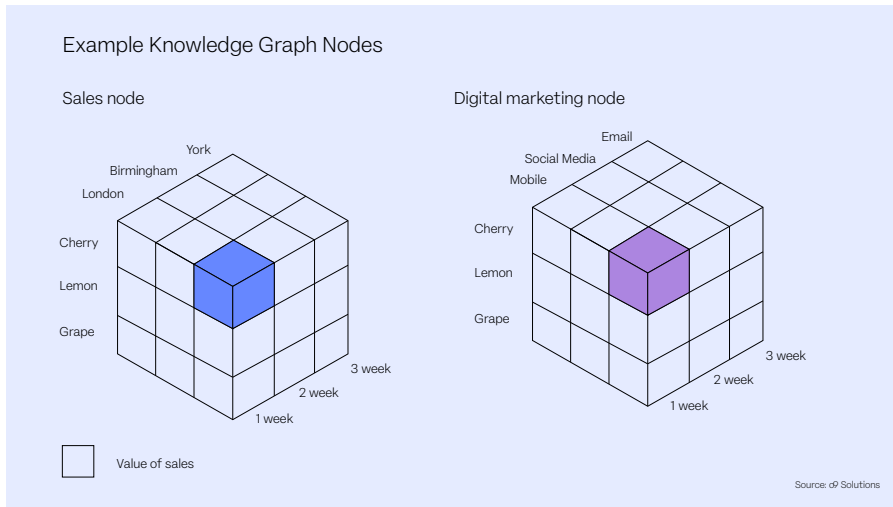
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Example Knowledge Graph Nodes

Figure 5.1

A more efficient approach has been developed in knowledge graph technology (Figure 5.1), which interrelates a series of multi-dimensional data models, or nodes (Figure 5.2), at different relevant levels of detail. These nodes are dynamically linked via a set of 'graph' relationships that connect the dots of existing fragmented datasets. This dynamic linkage of different data models enables each node to exist at the relevant level of detail for the analysis or decision-making process it supports. Analytics and complex decisions can be managed faster with a fraction of the computing power needed in a traditional model. New datasets, analyses, or decisions can easily be added to a knowledge graph over time by establishing a single 'graph' relationship to an existing node in the digital twin network.
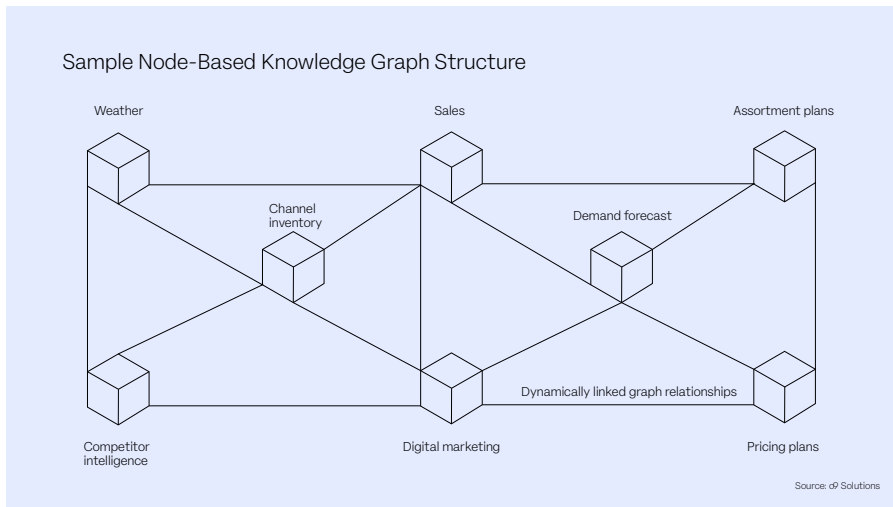

Figure 5.2

The most advanced digital twins use a knowledge graph-based structure to handle data and analytics. To support closed decision-making loops, many interdependent internal and external data sources are needed to build a causal picture of customer/consumer behaviour and associated financial impact. Digital twins that quickly propagate new knowledge upstream and downstream ensure that organisational leaders can be fully informed of the consequences and 'ripple effects' of their strategic and tactical decisions.

Executive guide for brand growth capability

Senior leaders in brand management can make key decisions today that will drive increased ROI across short-, medium- and long-term periods. While the range of options can seem daunting and certain choices could be seen as locking organisations into specific paths, there are tangible 'no-regret' actions that can be started immediately. There are four imperatives to kick-start impact across all time horizons for brand leaders at complex organisations:

1. **Catalogue organisational data and analytics, including granularity, gaps, and duplications.** A core issue of the digital knowledge paradox is that organisations often do not understand the full scope of their current data. By making a concerted effort (with real allocated resources) to map the knowledge within an organisation, executives can more easily know where gaps in granularity are papered over and where multiple functional resources are chasing similar datasets. This work is often severely undervalued by organisations, as often the 'so-what' is not immediately apparent—however, the effectiveness of all other measures hinges on quality data at the right aggregated levels.

2. **Align cross-commercial (marketing and sales) KPIs and define how these KPIs are measured and attributed.** KPIs do not need to be identical between brands, products, customers, and functions; however, they must be compatible at an organisational level. Market penetration based on discounting is fundamentally opposed to maximising gross margin percentage, but both could be valid strategies and KPIs for different products/ brands at different points in their life cycles. Senior executives should have consistent scorecards that tie together KPIs across functions and lean in early when observing situations where different parts of the organisation are at odds with each other.

As new channels emerge and AI/ML technology matures, brand organisations that have invested in cross-functional digital decision-making ecosystems will win disproportionately.

3. Invest in flexible technology that can provide a single source of truth across multiple functions and areas. In the past 40-50 years, tech solutions have proliferated: from rigid core ERPs to ultra-flexible worksheets to highly-focused point solutions with advanced analytics. The next frontier will be end-to-end cross-functional systems that both incorporate AI/ML to show a consistent internal point of view (e.g., a defined customer view from different directions: supply chain, sales, marketing, finance, etc.) and provide a framework to ingest new channels, data, and opportunities as they arrive (such as the metaverse).

4. Encourage early-career collaboration between marketing, sales, and technology functions. Akin to leadership development programs developed by major players such as GE and large banks since the 1990s, exposing young talent to cross-functional teams and processes will pay long-term dividends to complex organisations. However, rather than positioning such programs as 'rotations' in functions, cross-functional teams (especially across sales and marketing) should be emphasised as a permanent part of the organisation throughout all levels of seniority.

As new channels emerge and AI/ML technology matures, brand organisations that have invested in cross-functional digital decision-making ecosystems will win disproportionately. o9 are champions of this developing area, constantly innovating and improving enterprise offerings to create maximum value across the entire value chain of brand organisations. Together with IPA, o9 is proud to present this vision and seeks to partner with organisations of all sizes to maximise the value of commercial and technological investments.

Colophon

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