

# *PwC's analytics solutions for the FMCG sector*

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and confidential*



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# Overview

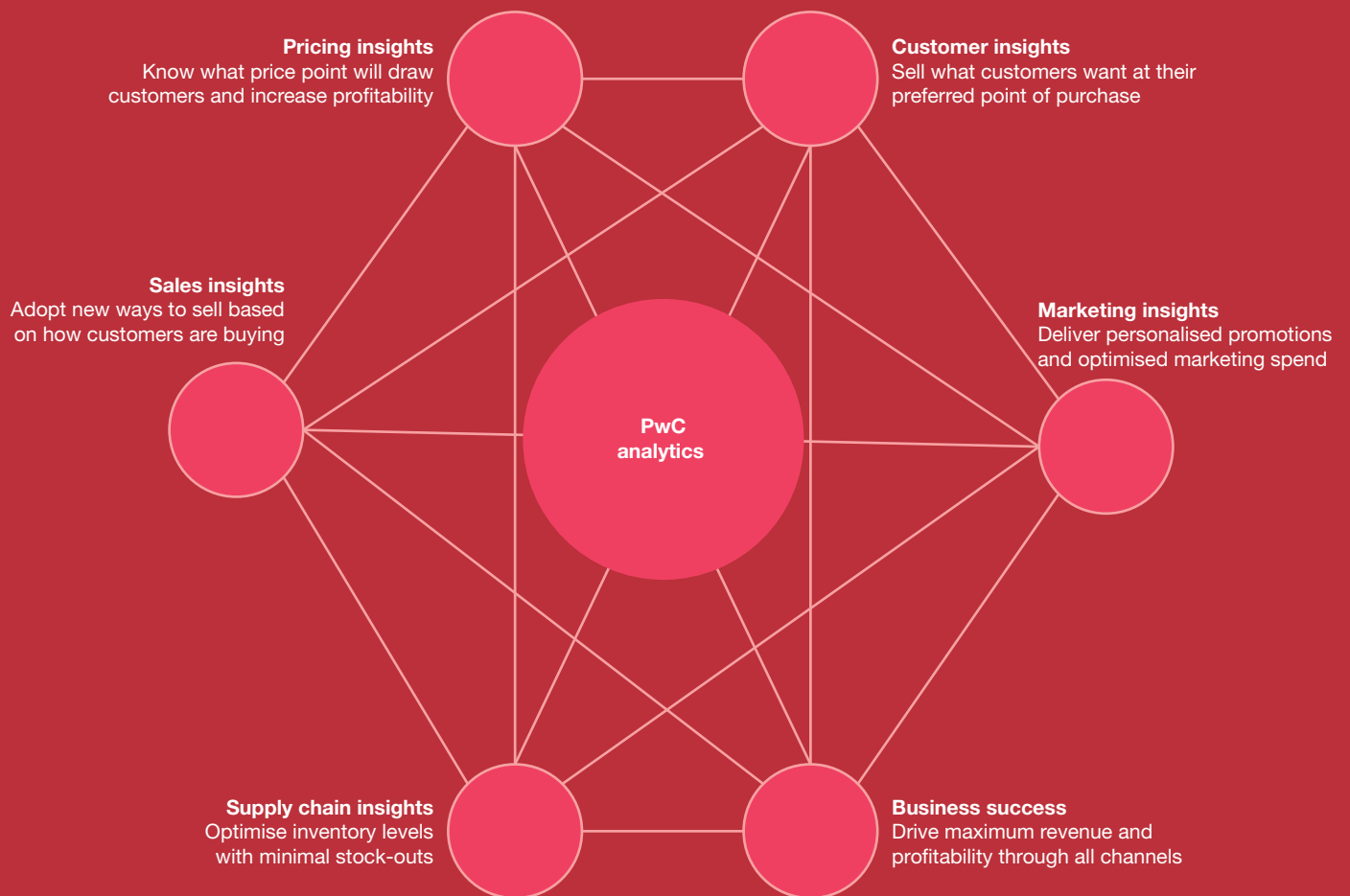
Indian consumers are changing at a faster pace than expected. Today, FMCG manufacturers rely on consumers ‘pulling’ products through the supply chain; thus, they require a better understanding of consumer behaviour and choices. Consumers are well-informed about product information—in particular, promotions and price comparisons via the Internet—which makes predicting behaviour very complex. This is where business analytics plays a very important role, as it allows organisations to derive predictive insights to enable competitive fact-based decisions. Armed with deeper insights into consumer behaviour, FMCG manufacturers will be able to direct R&D investment, improve the effectiveness of marketing and maximise supply chain efficiencies.

Let’s look at a few scenarios where analytics plays a crucial role in solving the challenges encountered by FMCG companies.

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# Business insights using FMCG analytics



# 1: Trade promotion optimisation

## Business challenges

- Identify the right price and discount point that maximises sales lift and return on investment (ROI)
- Optimise promotions to improve sales performance of newly launched products



## Analytics solution and results

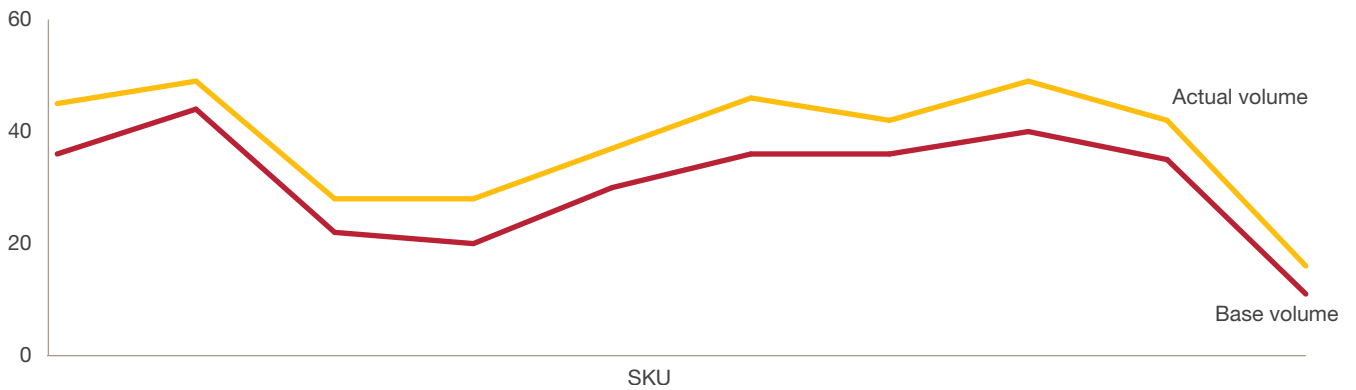
- Build a linear regression model to understand the impact of demand drivers on historical sales volume and calculate base volume
- Calculate total 'true' cost of promotions based on the individual components
- Calculate ROI for historical promo events

### The results: Improved ROI on trade promotions

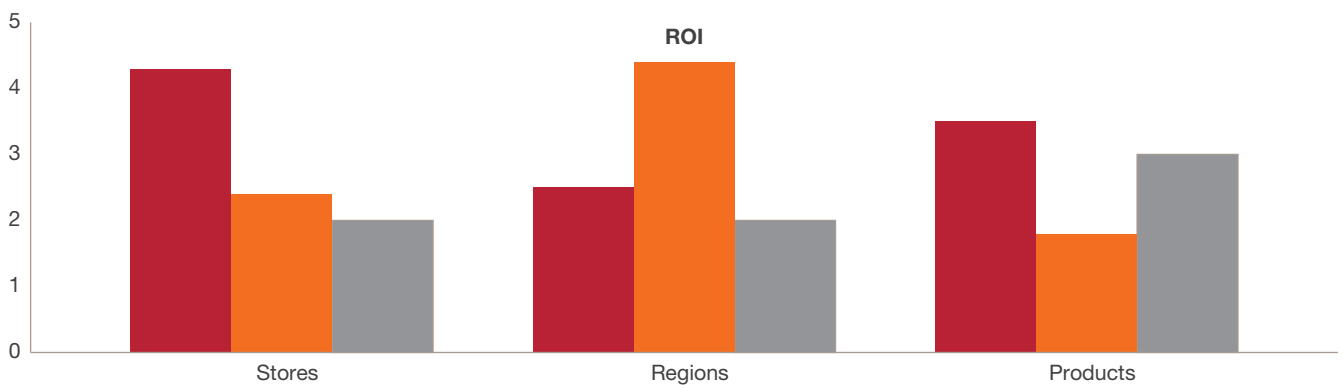
- Gained insights into the profitability of promotions across stores, regions and products
- Enhanced ability to benchmark scheme performance

## Sample snapshots and reports

### 1 Baseline volume calculation



### 2 Promotion ROI calculation



# 2: Marketing mix modelling

## Business challenges

- Calculate ROI of advertisement spend across various channels like television, print and web
- Understand consumer behaviour with regard to exposure to advertising

## Analytics solution and results

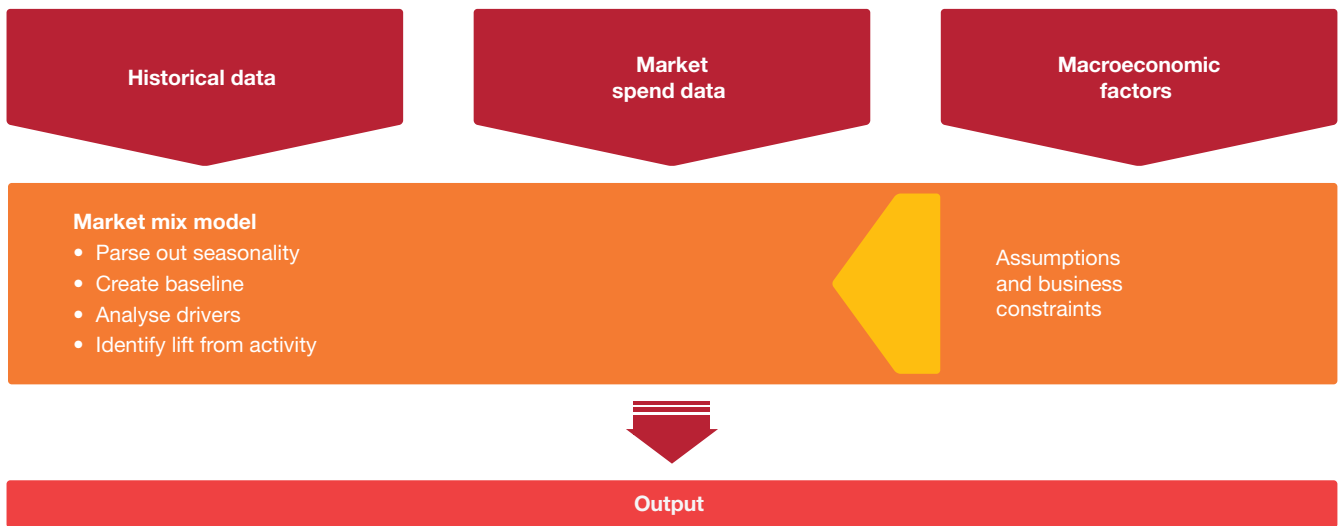
- Develop an analytic model showing impact of various marketing campaigns on sales
- Evaluate media effectiveness, ROI and simulate what-if scenarios

### The results: Media channel effectiveness

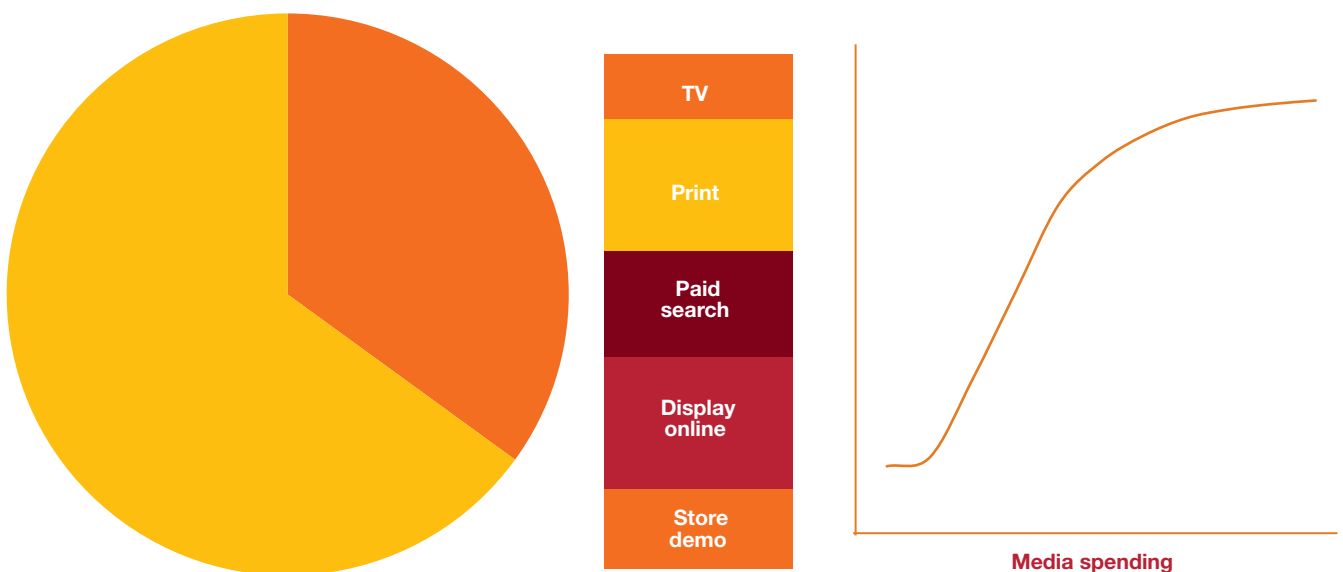
- Prioritised advertisement and promotion spend in favour of channels that provide better ROI
- Reduced the overall spend on advertising and promotion

## Sample snapshots and reports

### 1 Identify channels, campaigns, causal factors that impact sales



### 2 Develop model-driven scenario analysis to analyse their impact on sales



# 3: Vendor selection model

## Business challenges

- Find a vendor evaluation method to facilitate an objective, unbiased selection process
- Identify the key metrics of vendor performance that can help during negotiation with vendors on specific points
- Find a robust framework that can measure vendors' performance



## Analytics solution and results

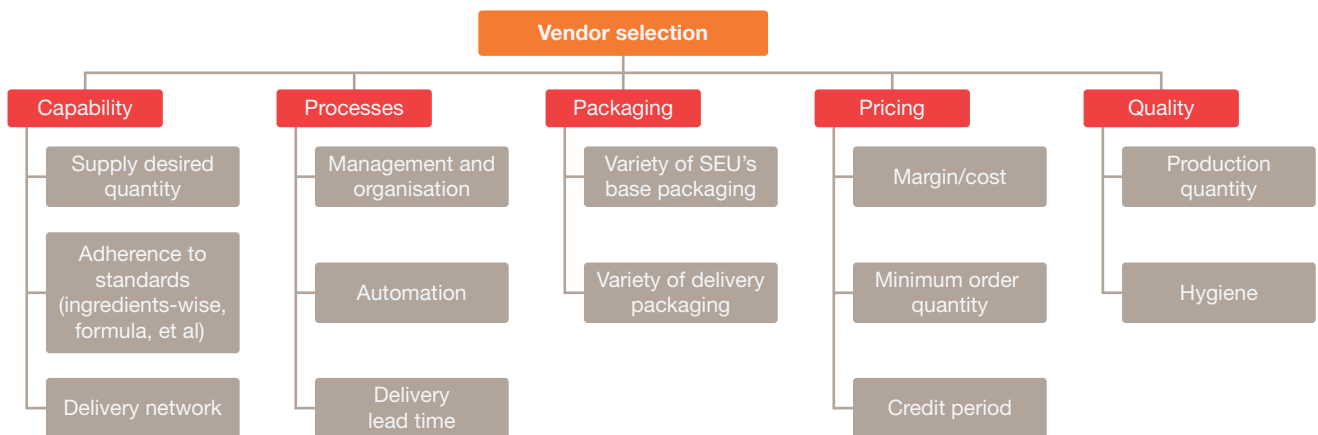
- Analytic hierarchy process (AHP) is a prominent approach in solving multi-criterion decision-making problems.
- The method allows the incorporation of judgements on intangible qualitative criteria alongside tangible quantitative criteria.

### The results: A tool for vendor negotiation

- Helped avoid conflicts through collaborative decision making
- Generated a repeatable process that saves time
- Measured vendor performance among peers and across time

## Sample snapshots and reports

### 1 Defining and ordering criteria



### 2 Evaluating vendors and selecting the best one

Criteria	Local weights	Sub-criteria	Local weights	Combined weights	Ranks
Capability	26.2%	Quantity	33.2%	8.7%	4
		Standards	38.3%	10.0%	1
		Delivery network	28.5%	7.5%	8
Process	21.9%	Management and organisatoin	30.6%	6.7%	10
		Automation	39.3%	8.6%	5
		Delivery lead time	30.2%	6.6%	11
Packaging	18.5%	SKU packaging	49.3%	9.1%	3
		Delivery packaging	50.7%	9.4%	2
Pricing	17.6%	Margin cost	36.7%	6.5%	12
		Minimum order quantity	38.9%	6.9%	9
		Credit period	24.4%	4.3%	13
Quality	15.7%	Product quality	50.0%	7.9%	6
		Hygiene	50.0%	7.9%	6



# 4: Sales forecasting

## Business challenges

- Identify a scientific methodology to accurately predict future sales volumes
- Improve target setting by identifying current market conditions and their impact on customer sales

## Analytics solution and results

- Develop a robust sales forecasting model through aggregation and statistical analysis of data
- Develop a structured what-if analysis mechanism to create multiple scenarios

### The results: Improved planning

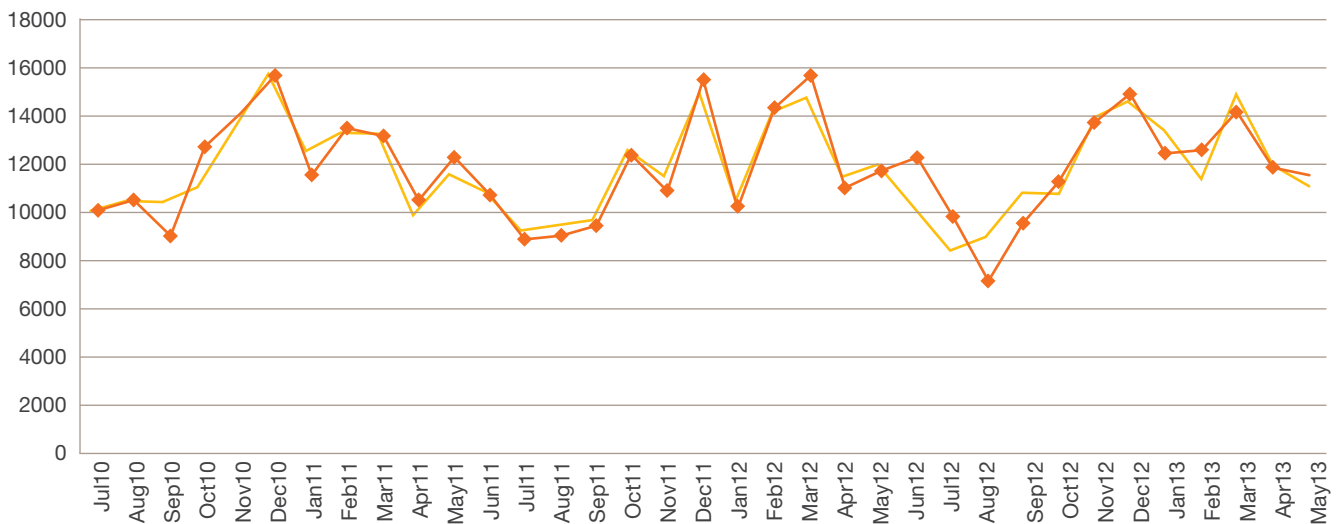
- Predicted sales volumes based on critical demand drivers
- Improved decision making through structured scenario analysis

## Sample snapshots and reports

### 1 Identify the key events, causal factors that impact sales



### 2 Develop model-driven scenario analysis to analyse their impact on future sales



# 5: Pricing recommendation

## Business challenges

- Understand the impact on sales for a given change in price (pricing elasticity) across products and understand the impact on the contribution margin
- Ensure a consistent scientific methodology is being applied to pricing decisions across categories/outlets

## Analytics solution and results

- Build a pricing model to enable an effective pricing structure for various product categories
- Optimise pricing to improve margins and bottom-line profitability

### The results: Improved planning

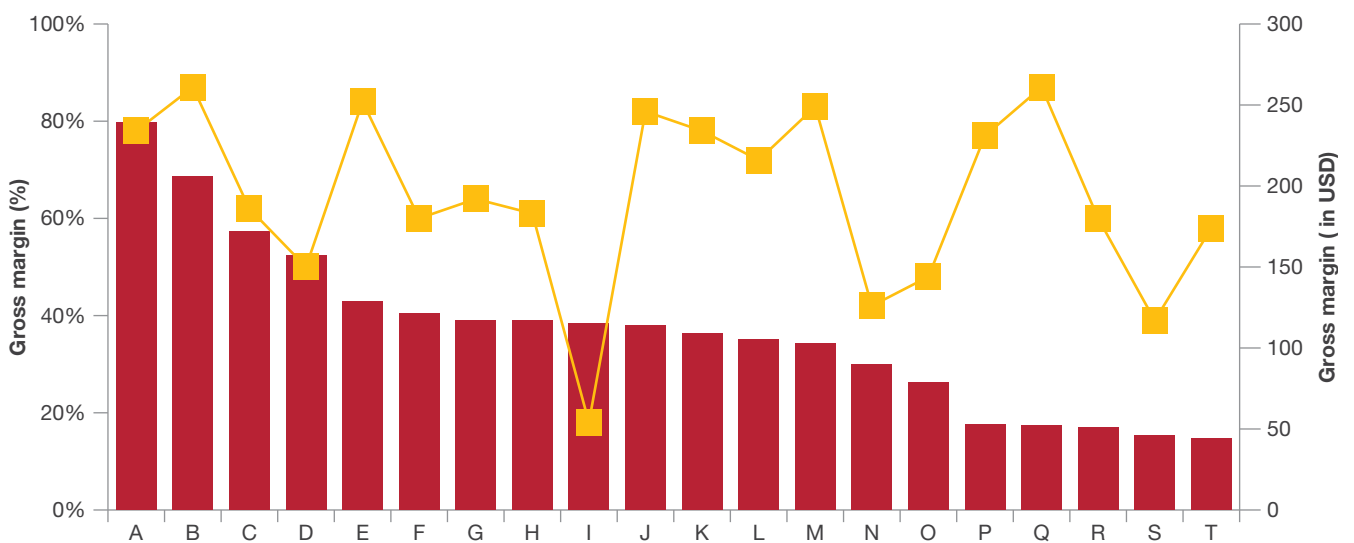
- Data-driven pricing suggestions for greater sales and incremental contribution margin

## Sample snapshots and reports

### 1 Establishment of price elasticity across the product portfolio



### 2 Suggest optimal pricing to drive immediate contribution margin





# 6: Sentiment analysis

## Business challenges

- Capture customer feedback across various social media platforms and derive meaningful conclusions, which could be sent to relevant functions within the organisation
- Improve brand strength and engage with customers in a meaningful way



## Analytics solution and results

- Web crawlers to capture unstructured data across various social media platforms
- A text mining model for parsing conversations into positive, neutral and negative buckets

### The results: Instant customer feedback

- Sentiment analysis can help to track consumer behaviour in real time across channels, monitor online brand health and also uncover the levers that can have a significant business impact.

## Sample snapshots and reports

### 1 Capture customer conversation on social media platforms

Company

Competitors

Market

### 2 Develop sentiment analysis for business insights

Word cloud terms: chocolate, dark, rich, bliss, pleasure, addict, intense, taste, sugar, cocoa beans, sauce, confectionery, desire, coffee, ruffles, pure, dessert, white, gift, gourmet, divife, temptation, cocoa, ruffles, pure, chocolate, sugar, cocoa beans, sauce, taste, addict, intense, dark, bliss, pleasure, rich, confectionery, desire, coffee, ruffles, pure, dessert, white, gift, gourmet, divife, temptation, cocoa.

Sentiment icons:  (Happy),  (Neutral),  (Angry)

# 7: Inventory optimisation

## Business challenges

- Align inventory planning, forecasting and execution capabilities across the organisation
- Obtain insights from vast volumes of data at the SKU location on a weekly/daily level to improve inventory forecasting

## Analytics solution and results

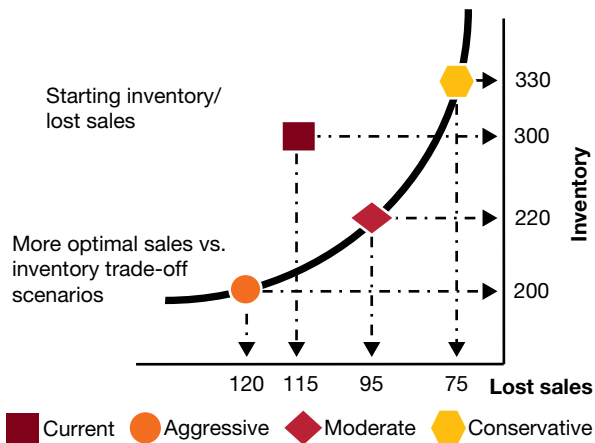
- Employ statistical modelling techniques to perform inventory stock level vs lost sales scenario analysis
- Develop robust demand forecasts through statistical analysis of data across outlets

### The results: Improved inventory management

- Suggested order quantity recommendations to reduce out-of-stock frequency
- Optimised balance between inventory stock and lost sales based on the economics and competitive environment of the business

## Sample snapshots and reports

### 1 Perform inventory stock vs lost sales scenario analysis



### 2 Optimise inventory levels taking into account all supply and demand variables

SKU	Suggested order	Actual order	Suggested order	Actual order	Suggested order	Actual order
AB123	25	28	20	20	25	21
CD456	10	10	10	10	16	16
EF789	7	7	5	9	9	9
<b>Total</b>	<b>42</b>	<b>45</b>	<b>35</b>	<b>39</b>	<b>50</b>	<b>46</b>

# 8: Product launch benchmarking and cannibalisation

## Business challenges

- Leverage analytics to identify factors critical to new product success
- Understand how sales and contribution margin of a new product should be benchmarked to assess performance
- Analyse the level of cannibalisation from a newly launched product

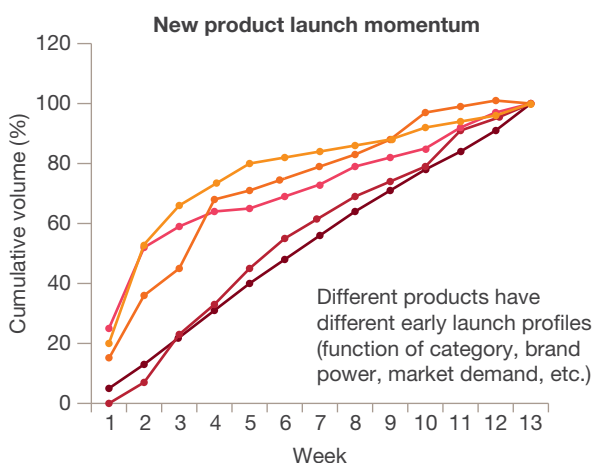
## Analytics solution and results

- Structure a set of indicators to measure a product launch based on multiple analytical and modelling techniques
- Estimate the impact of the product launch on overall market share through statistical analysis and field analytics

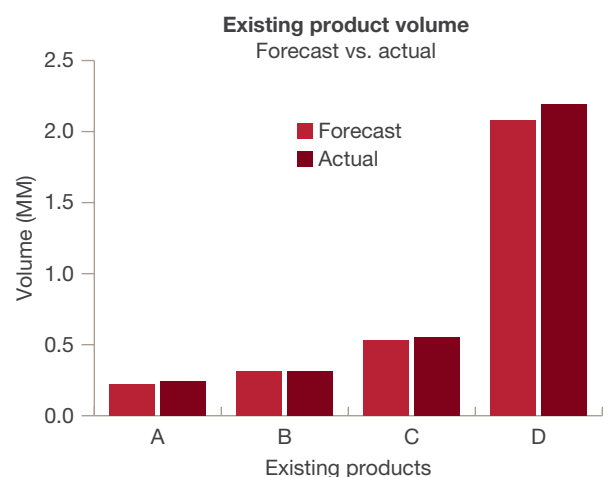
**The result:** Recommendations to steer early launch execution to ensure greater success or to limit investment on launches likely to fail

## Sample snapshots and reports

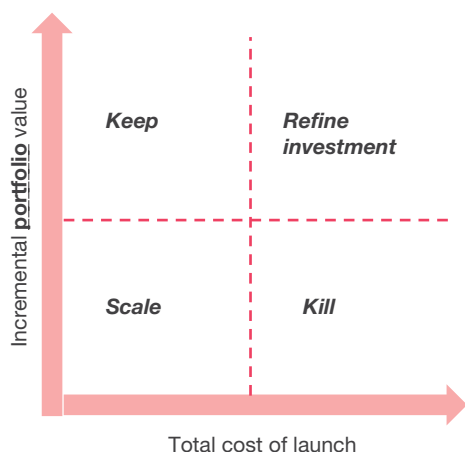
### 1 Assess new product comparative launch momentum



### 2 Understand cannibalisation of existing products



### 3 Develop insights to steer the success of the newly launched product



# 9: Price and pack analytics

## Business challenges

- Define the right brands, packs and prices for the specified channel/customer to meet targeted consumer and shopper needs

## Analytics solution and results

- Using modelling, PwC's price and pack analytics optimises channel performance, package diversity, pricing and other key value drivers.



### The result: Increased SKU efficiency

- Increased revenue across the portfolio
- Increased market share and value share
- The right packs and prices by outlet

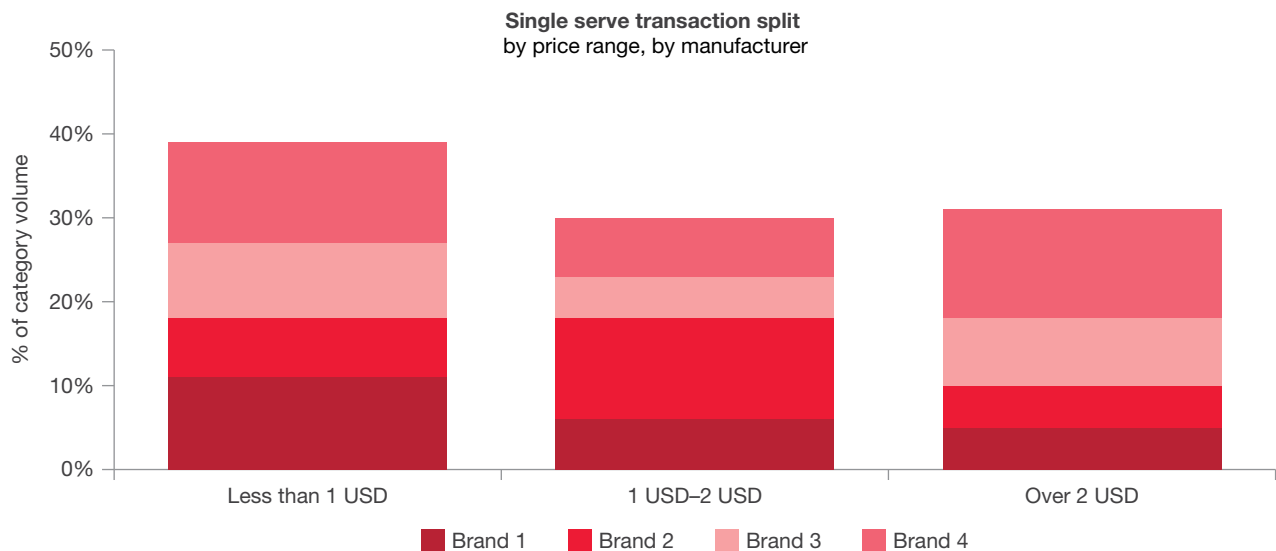
## Sample snapshots and reports

### 1 Identify SKUs for potential deletion based on a variety of factors, from current contribution margin to time in the market and substitutability

SKU volume rank	SKU revenue rank	Gross profit (in thousand USD)	New or old?*	Competitive products exist? (Y/N)	Unique product role? (Y/N)	Component of growth vision? (Y/N)	Keep or delist? (Y/N)
244	253	9	Old	Y	N	Y	Y
245	260	1.7	Old	N	N	N	N
246	188	12	New	N	Y	N	Y
247	255	4.8	New	Y	N	Y	Y

\* New products defined as introduced in past six months

### 2 Understand pricing distribution across brands as a percentage of volume



# 10: Vending machine ROI

## Business challenges

- Forecast incremental volume and contribution margin associated with new vending opportunities
- Understand ROI of adding cashless swipe to new and existing machines, including both cost and precision pricing

## Analytics solution and results

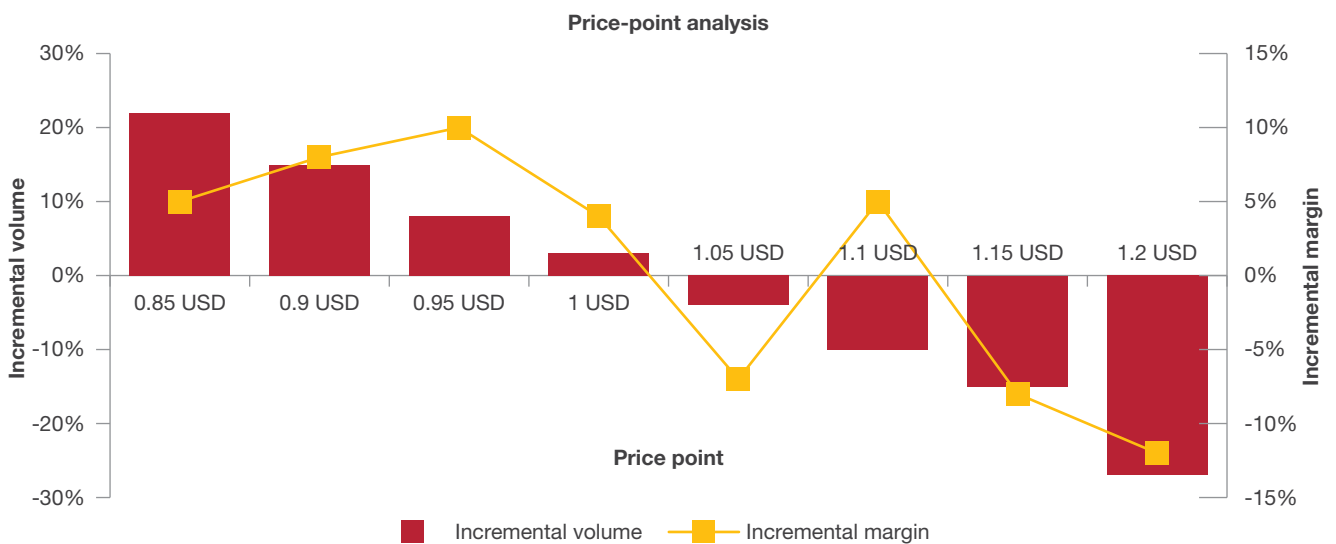
- Identify true cost to serve of vending machine network, including both direct and indirect costs
- Develop data-driven fact base for precision price setting, with and without cashless swipe

### The result: ROI by vending machine

- Profit drivers quantified (commission, location, cost to serve, etc.)

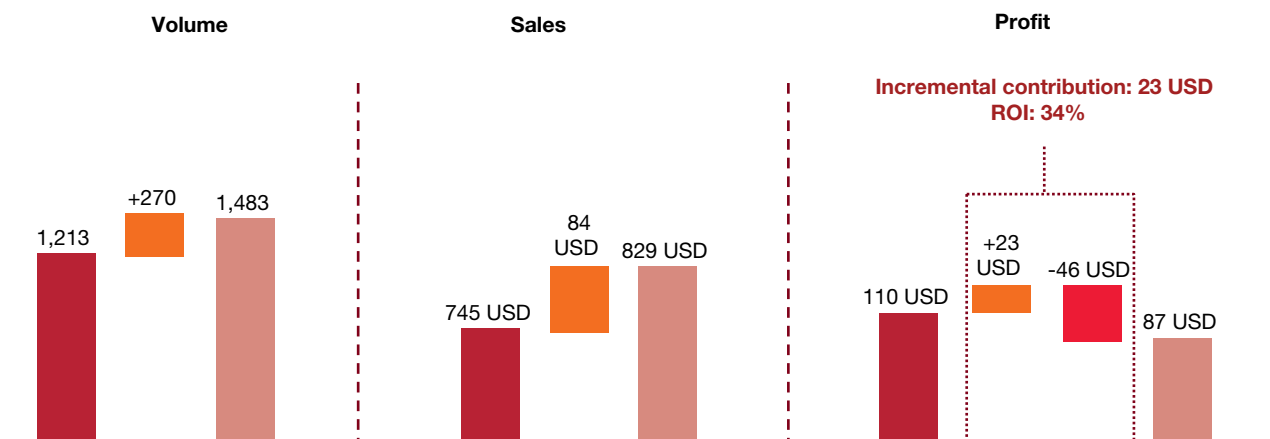
## Sample snapshots and reports

### 1 Develop a data-driven fact base for precision price setting



### 2 Calculate incremental contribution margin and ROI of potential vending machine recommendations

#### Incrementality analysis



# 11: Assortment intelligence

## Business challenges

- Track the competitors' assortments and their pricing dynamically (real time) to optimise personal product portfolio
- Identify products, brands and categories where one has a unique advantage
- Identify gaps in catalogues so as to take decisions on adding them and overlaps to price them at extremely competitive rates



## Analytics solution and results

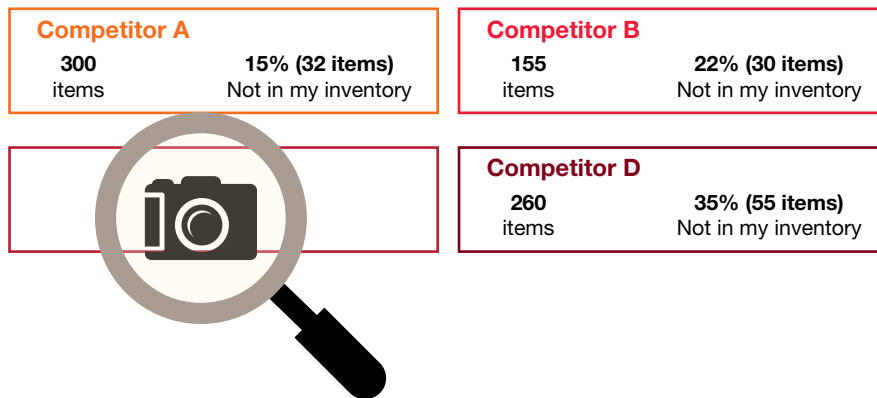
- Real-time price monitoring and analytics using advanced artificial intelligence (AI), semantic analysis, data mining, and image-recognition algorithms
- Trend analysis (trending now, popular) using predictive algorithms in order to sell the right products at the right time and drop products that are cooling in popularity

### The result: Growing bottom line

- *Provided view of competitors' product assortments, enabling a company to quickly adjust its own product mix and pricing so as to make profitable pricing decisions and drive sales performance*

## Sample snapshots and reports

### 1 Analyse the gaps and overlap with competitors' products



### 2 Optimise assortment by understanding how the competition managed their catalogues



# 12: Multichannel advertising analytics

## Business challenges

- Understand which combination of ad exposures interacts to influence the consumer to make a purchase
- For example: A TV ad can prompt a Google search on a mobile phone, which can lead to a click-through on a display ad and ultimately end in sales.
- Identify whether the company is investing the right amount at the right point in the customer decision journey to purchase a product



## Analytics solution and results

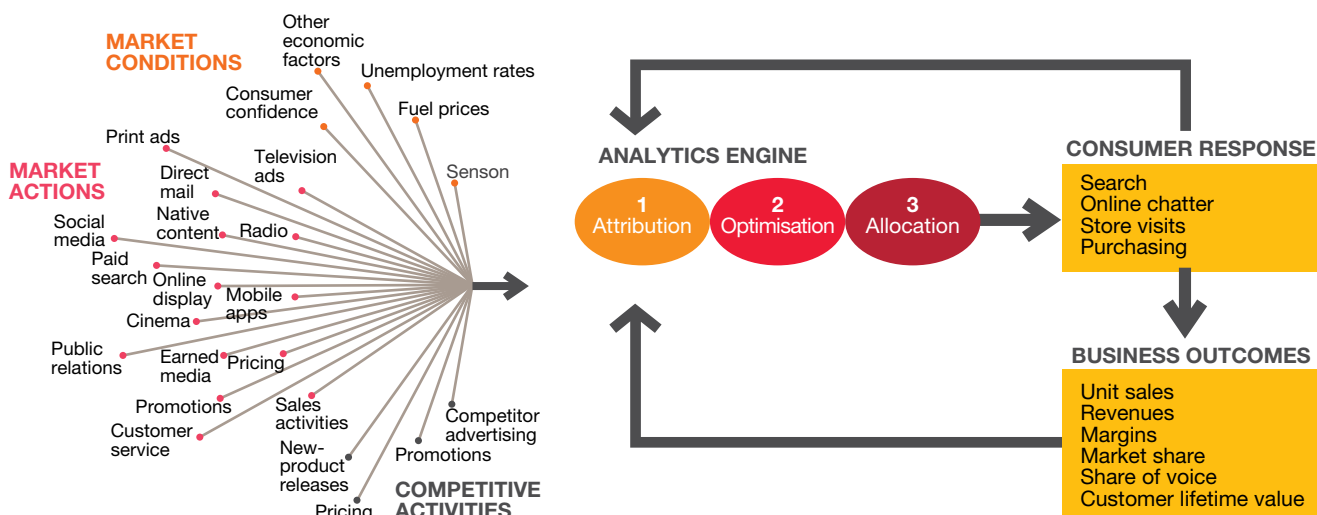
The solution involves three broad activities:

- Attribution: Quantifying the contribution of each element of advertising
- Optimisation: Use of predictive analytics tools to run scenarios for business planning
- Allocation: Real-time redistribution of resources across marketing activities according to optimisation scenarios

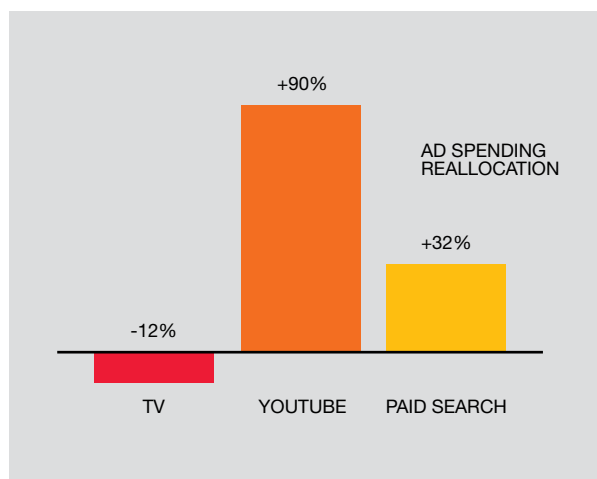
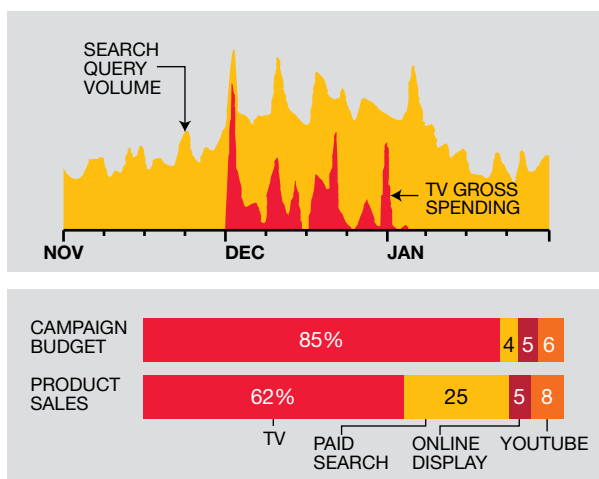
**The result:** Measure how TV, print, radio and online ads each functioned independently to drive sales and then allocate marketing spend based on lift and ROI.

## Sample snapshots and reports

### 1 Understand the relationship of ads across channels



### 2 Measure cross-media, cross-channel effects on retail traffic



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***PwC can help you deal with all of these and other challenges through the use of analytics, allowing you to have access to information quickly and accurately and in formats that will enable you to make meaningful business decisions in real time.***

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# Why PwC?

## ***Strong FMCG sector expertise***

Our consultants have a proven track record of working with leading FMCG players in India and have strong domain knowledge in the consumer space.

## ***Scalable, flexible and cost-effective offerings***

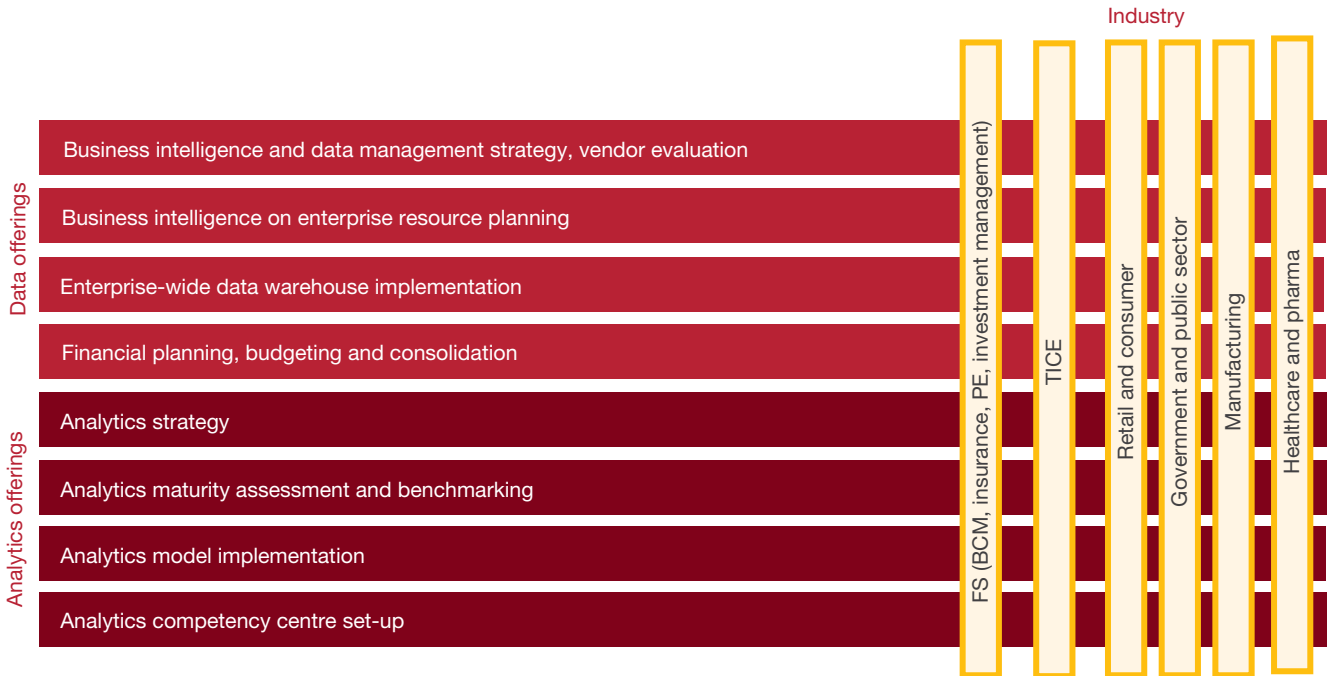
Our analytics solutions can be customised as per an FMCG player's specific needs across different areas.

## ***Cutting-edge technology***

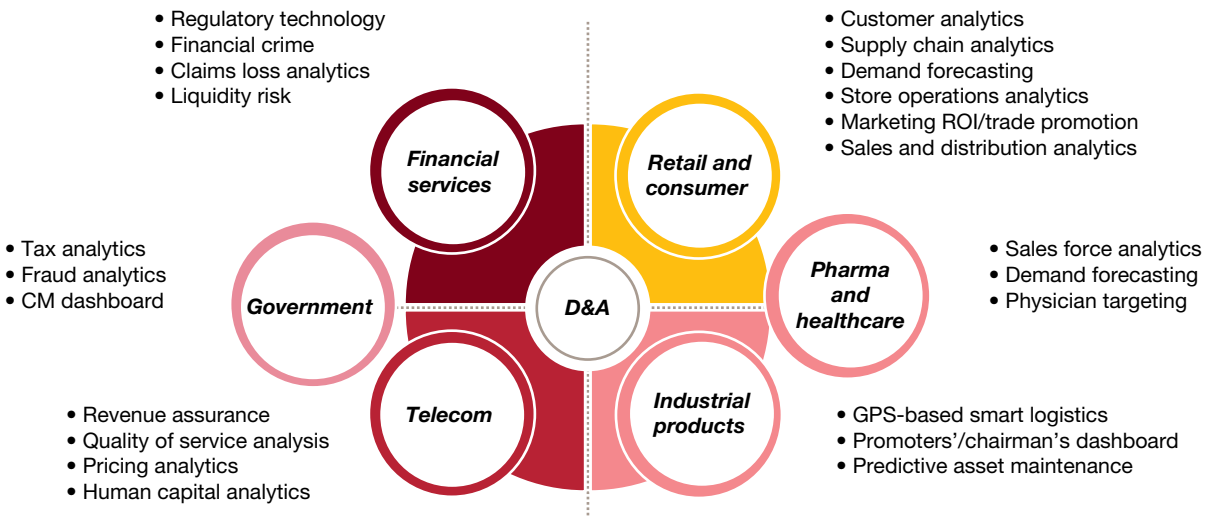
We have expertise in implementing FMCG analytics through leading market tools by aligning them to the client's technology landscape.



# Our Data and Analytics offerings



## Data and Analytics key industry-wise services



### Cross-industry offerings

- Big data strategy and implementation
- Data management
- Business intelligence and data management strategy
- Vendor evaluation
- Social media analytics
- Master data management
- Financial planning, budgeting and consolidation
- Analytics competency centre set-up

# About PwC

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