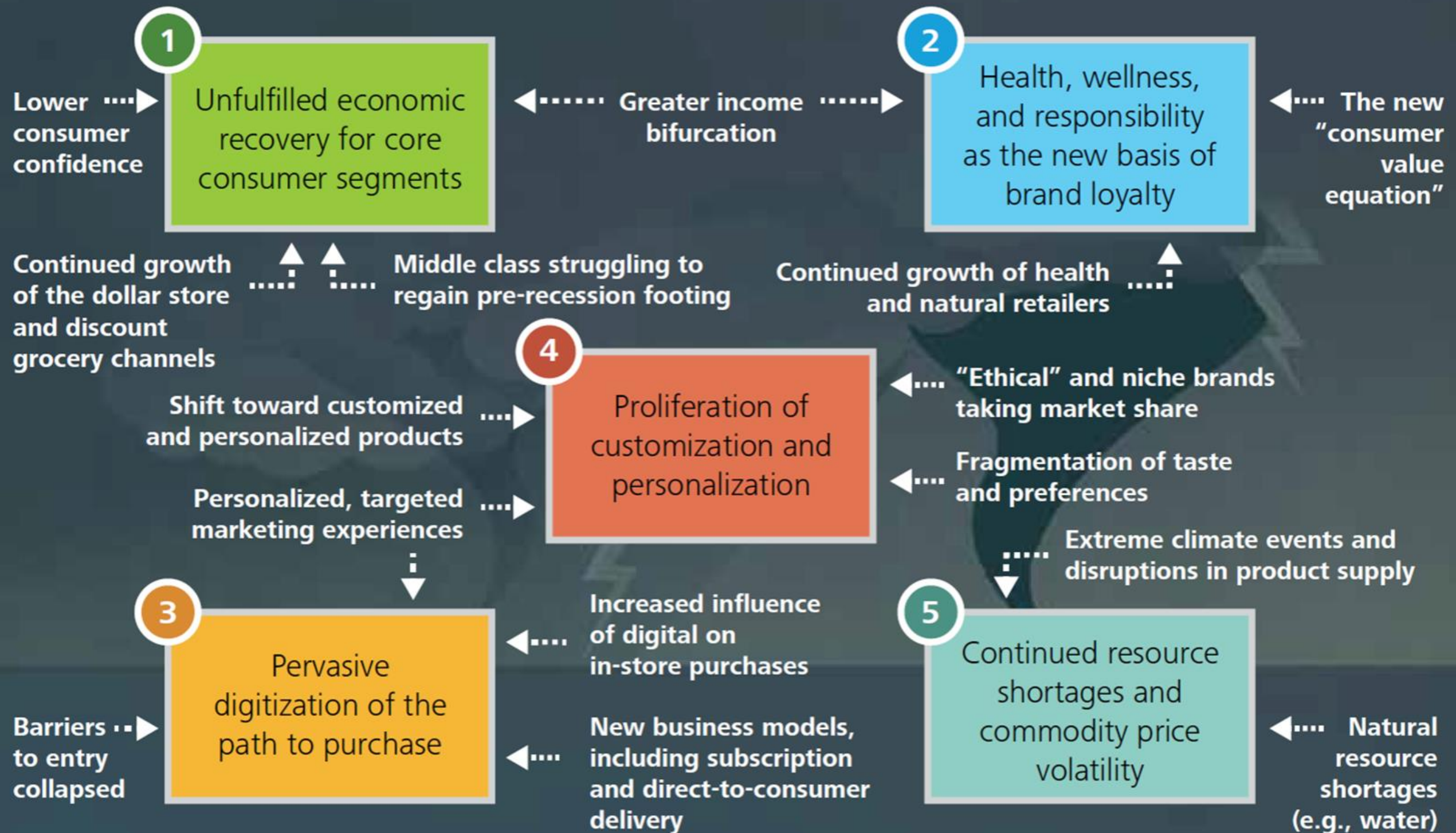




Fast Moving Consumer Goods Analytics Framework

Point of view
Amsterdam, 2017

Key Trends impacting FMCG



Using Analytics to stay ahead of the game

Effective use of analytical capabilities will enable FMCG companies to cope with and even benefit from the key trends impacting FMCG

1

Unfulfilled economic recovery for core consumer segments

Analytics supports the shift to value by identifying key price points in the market, defining customer segments, developing new pricing strategies based on competitive intelligence and increasing efficiency in manufacturing and logistics to reduce costs

2

Health, wellness and responsibility as the new basis of brand loyalty

Companies will experience greater pressure to better align offerings and activities with customer interests and values. Big Data and analytics help to better understand customer sentiment, preferences and behaviour. At the same time data analytics enables supply chain visibility and identifies potential risks

3

Pervasive digitization of the path to purchase

An increasingly larger share of consumer's spend and activity will take place through digital channels. Analytics is key in better understanding of purchase and consumption occasions as well as tailoring channel experience

4

Proliferation of customization and personalization

In a world where customized products and personalized, targeted marketing experiences win companies market share, technologies like digital commerce, additive manufacturing and artificial intelligence can give a company an edge by allowing it to create customized product offerings

5

Continued resource shortages and commodity price volatility

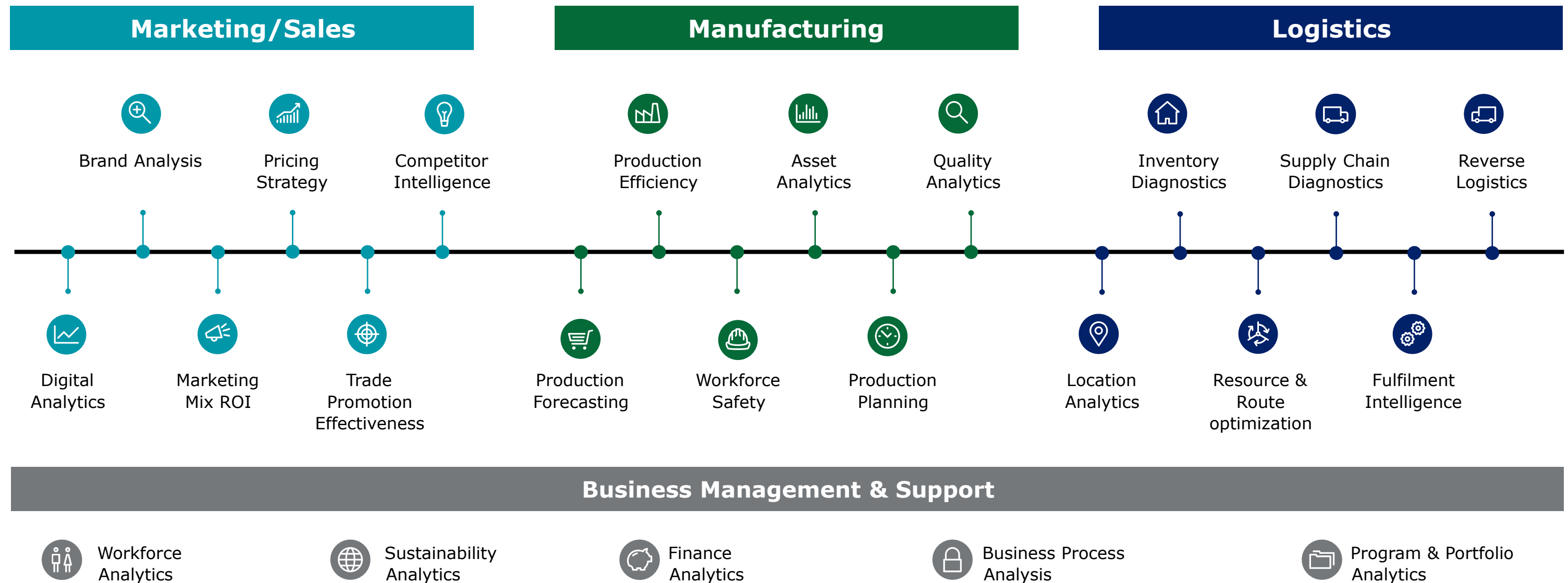
Analytics can fuel a better understanding of the resource market volatility and more efficient use of critical resources in the production process

FMCG Analytics Framework



FMCG Analytics Framework

Analytic capabilities for better decisions across the FMCG value chain



FMCG Analytics Framework – Marketing/Sales



FMCG Value Chain – Marketing/Sales

In the Marketing/Sales process of the FMCG value chain, analyses are geared towards improving commercial performance and customer centricity

Marketing/Sales



Digital Analytics

The online channels are of increasing importance, also in FMCG. Defining a uniform digital KPI framework and building web analytics capabilities is key to create insights into the digital performance on the ecommerce platforms.



Brand Analysis

This analysis focuses on providing insights into the brand perception of a firm. With the use of (among others) sentiment analysis the firm can compare the perception of their brand with that of the main competitors and create a data driven brand strategy.



Marketing Mix ROI

Analyses focus on determining the effectiveness of marketing investments. By reducing ineffective spend and intensifying high return marketing tactics, the marketing mix is optimized leading to higher returns on the overall marketing spend.



Pricing Strategy

The analysis focuses on demand variation at different price levels with different promotion/rebate offers. It is used to determine optimal prices throughout the product/service lifecycle by customer segment. Benefits include increasing sales margin, decreasing markdowns and aiding inventory management.



Trade Promotion Effectiveness

This analysis focuses on providing insight in both the effectiveness and planning of trade promotions. These insights allow the company to improve the aforementioned processes to increase sales while keeping the marketing costs at the same level.

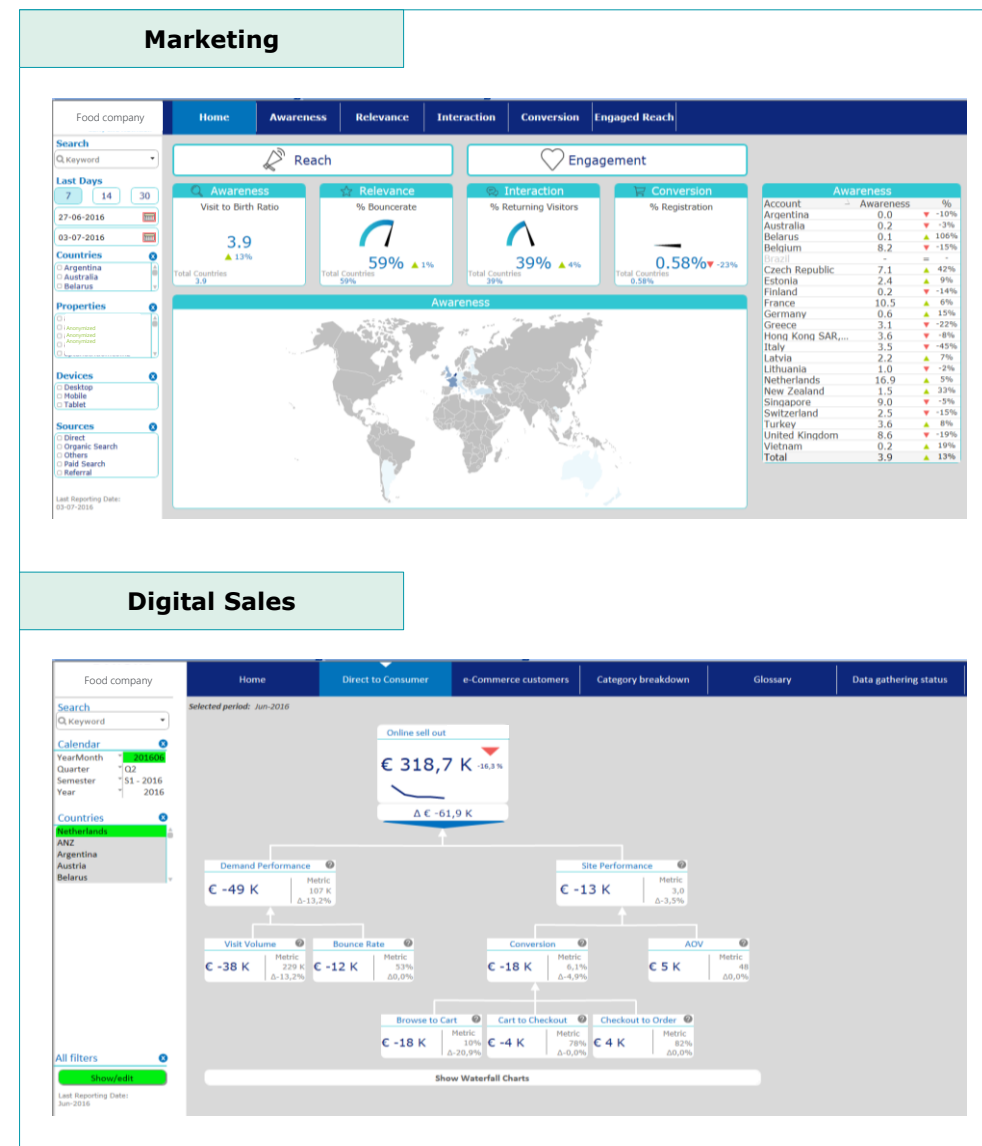


Competitor Intelligence

Knowledge is power. Knowledge of what your competitors are doing allows you to take action quickly in order to gain an advantage. This analysis focuses on obtaining this knowledge and extracting the actionable insights that allow one to form data-driven competitor strategy.

Case study – Digital Analytics

Defining a KPI framework and embedding it through online dashboards



Challenge

This global Food company wanted to undergo a digital transformation. However there was little visibility on web analytics capabilities, no accessibility to in-market web analytics, limited standards and KPI definitions and reporting. For e-commerce there little to no online market share data available in the countries

Approach

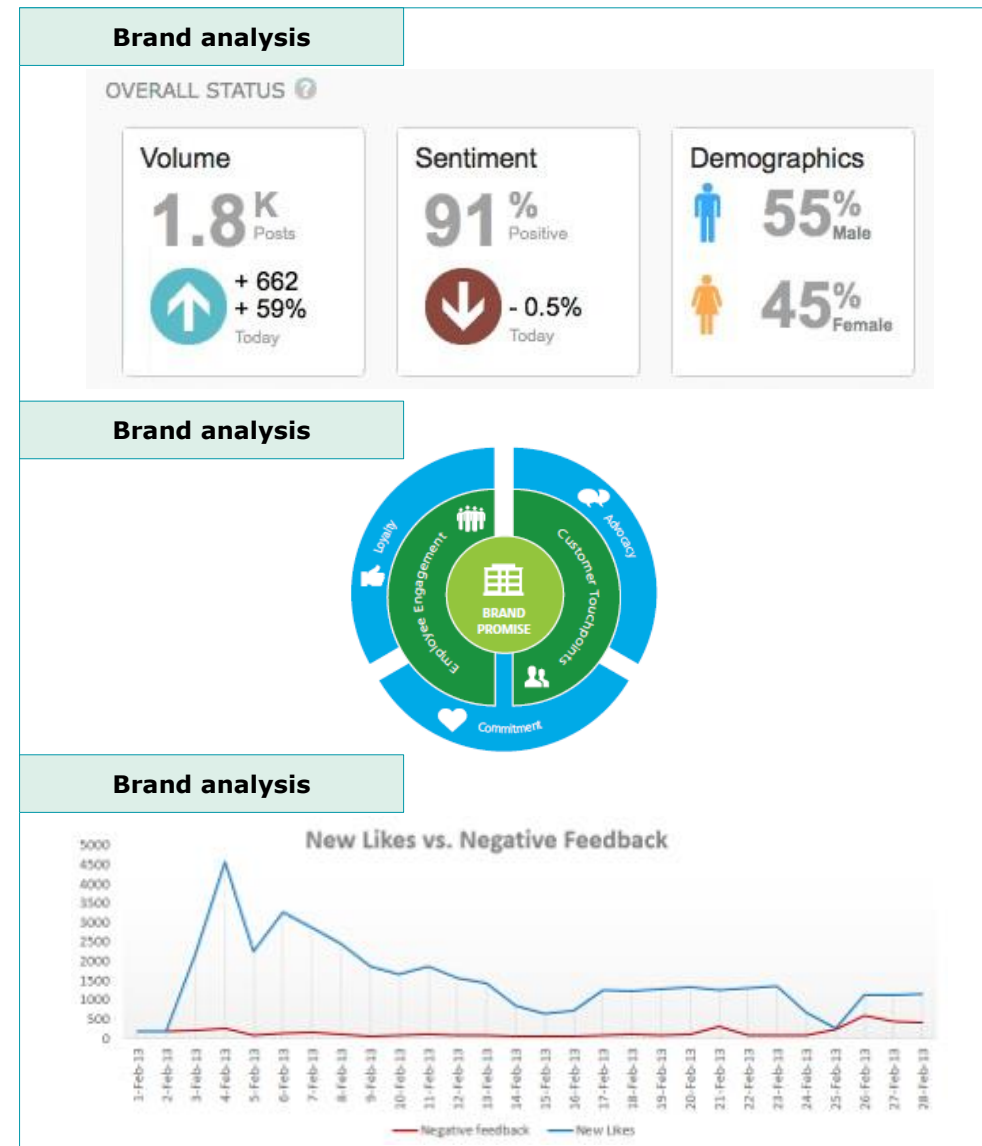
Deloitte supported in defining uniform KPIs and a roadmap for implementation for both domains. Deloitte supported in extracting web analytics data and requesting in-market data about on-line market share from the countries. The first phases for both marketing and e-commerce were to develop tooling to measure and compare digital performance across target countries for both marketing and e-commerce

Benefits

- Delivered a marketing dashboard & KPI framework with global definitions
- Delivered a (hosted) e-commerce dashboard & KPI framework with global definitions, also making web analytics more financial by measuring the financial impact of web analytics
- Finally, the roadmaps for both marketing and e-commerce providing clear guidance on maturing in the area of online marketing and e-commerce

Case study – Brand Analysis

Investigating brand perceptions by assessing positive and negative opinions regarding the firm



Challenge

The firm wanted to investigate its brand perception by assess positive and negative opinions regarding the firm. They wanted to be able to highlight locations showing positive and negative perceptions. The client also wanted to compare their firm with the main competitors in order to create a data-driven brand strategy

Approach

The project involves a web spider which extracts related and unstructured data from the internet from a number of different sources (social media, blogs, news feeds etcetera). The analysis is then carried out in a text mining tool to process the data for sentiment related content and output the results to an interactive dashboard for visualization

Results

The results of the analysis include sentiment scores across the business areas and a root cause analysis. These enable a real-time understanding of their online brand and identification of the differentiating factors between positive and negative perceived programs/areas. The delivered insights can be used to determine the necessary actions in order to promote the firm's brand in certain programs/areas

Case study – Omni channel voice of the customer

Analysis of customer voice topics and sentiment across multiple channels

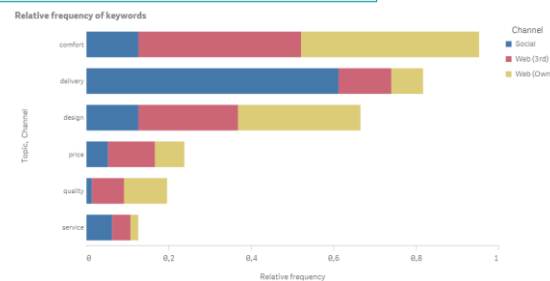


Sentiment analysis across channels

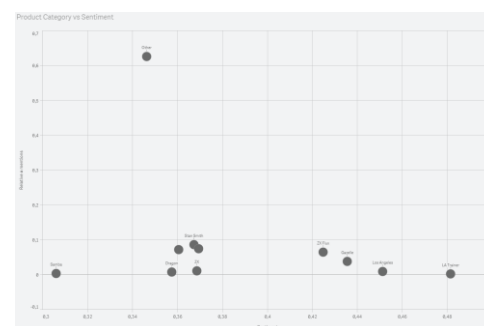
Sentiment by Channel

Product	Overall		Social		Web (3rd)		Web (Own)	
	#	Sentiment	#	Sentiment	#	Sentiment	#	Sentiment
Overall	100,01	0.31	8,41	0.85	3,41	0.27	87,19	0.34
Other	65,83	0.38	8,41	0.85	1,85	0.30	55,19	0.31
Stan Smith	0,05	0.38	-	-	0,15	0.30	0,05	0.35
Superstar	0,05	0.35	-	-	1,15	0.40	0,05	0.35
Tubular	0,25	0.38	-	-	0,15	0.12	0,15	0.38
ZX Flux	0,15	0.31	-	-	0,15	0.68	0,05	0.31
Gazelle	3,35	0.31	-	-	0,15	0.30	3,45	0.35
Los Angeles	1,05	0.31	-	-	0,05	0.47	0,95	0.31
ZX	0,05	0.35	-	-	0,05	0.45	0,05	0.35
Dragon	0,05	0.31	-	-	0,15	0.41	0,05	0.31
LA Trainer	0,35	0.40	-	-	-	-	0,35	0.40
Samba	0,25	0.31	-	-	0,05	0.46	0,15	0.38

Topic classification and frequencies



Trending topics per product / channel



Challenge

Customers leave their voices across different channels such as company website, third party resellers, customer service emails, telephone and social. Capturing, classifying and combining data from these channels is challenging. Our solution enables CMOs to focus their attention where it is most required

Approach

This proof-of-concept focusses on three channels (own website, third party website and social). First web scraping used to collect raw customer voices from different channels in different markets. Then a classification model is used to identify key topics and subtopics for each voice, another classification model is used to identify the product(category) of the topic, and finally sentiment analysis is performed on each of the voices. The results are visualised in an interactive dashboard

Results

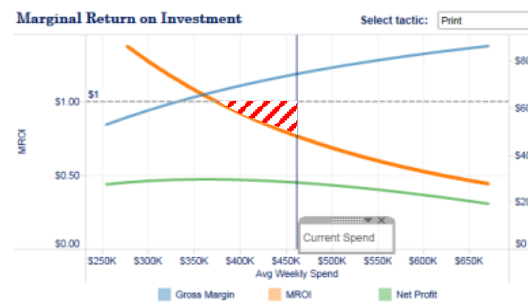
- The solution provides insights into the sentiment of voices per product category, per market
- Key topics are visible and trending topics can be assessed by product category, channel or market
- The solution provides a quick overview of all voices across all products, channels and markets, but also enable drill-down to the voice level

Case study – Marketing Mix ROI

The use of combined online & offline Marketing Mix Modelling to improve the Marketing ROI



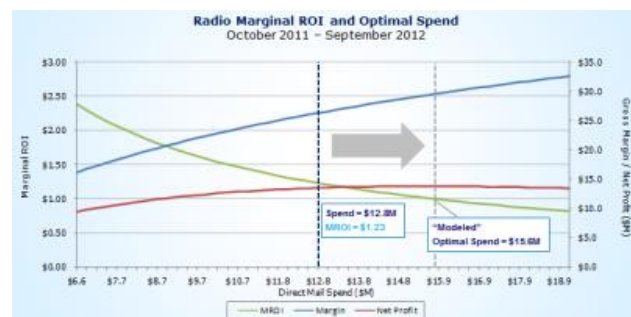
Scenario analysis



Marketing ROI



Marketing return curves



Challenge

Deloitte was engaged in improving return on marketing spend and optimizing the advertising investment mix with disparate departments, differing measuring systems and differing priorities to improve marketing ROI across both offline and online channels simultaneously. This case was executed for an omnichannel retailer

Approach

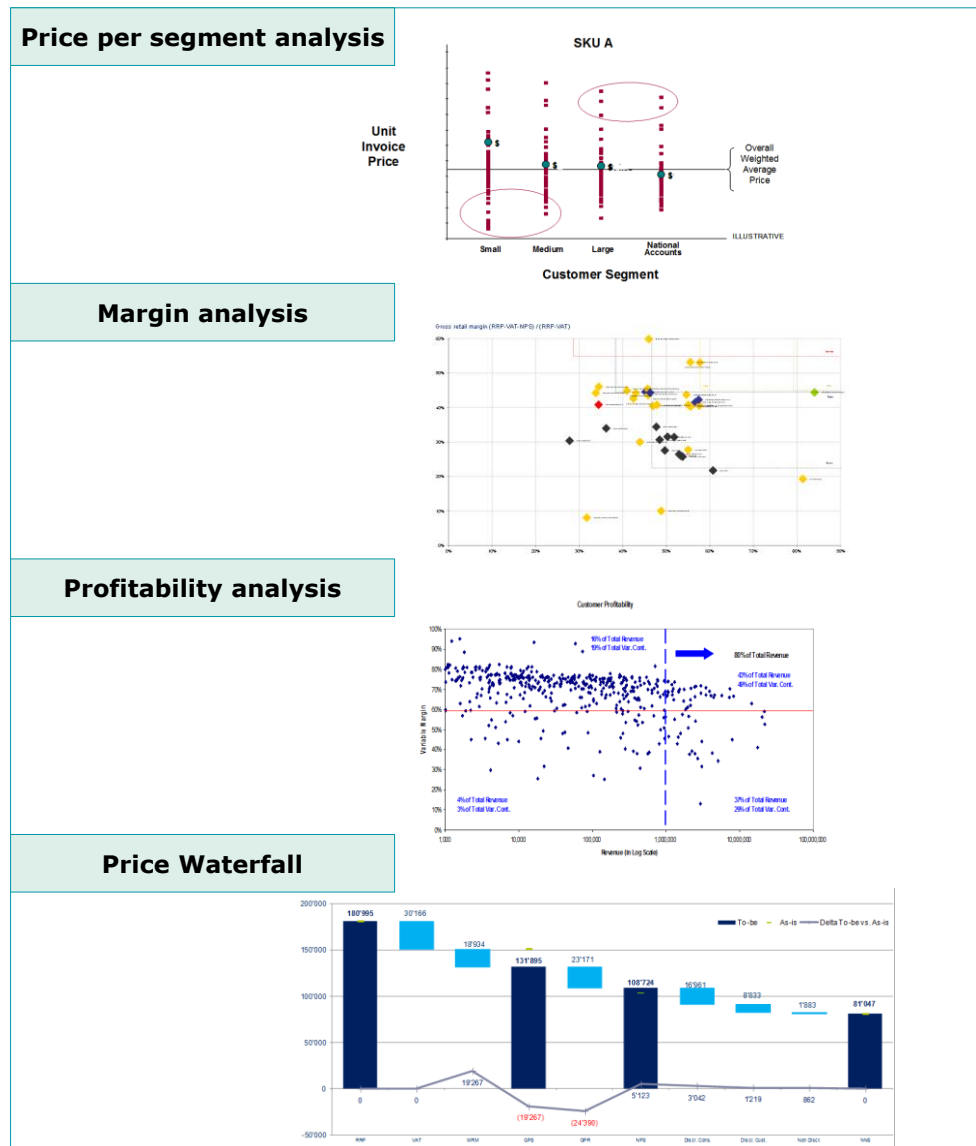
First the metrics needed for the model were prioritized across products, channels, and categories. A data warehouse was built to hold the required variables for each product that was needed to continuously run the Marketing Mix Modelling. With all the data present, the Marketing Mix Model was developed to optimize marketing ROI by using Scenario analysis and Optimization models. Finally the marketing ROI tracking system was implemented to continuously track the results of the models

Results

- The most significant result was that the marketing ROI doubled over a two-year period
- To ensure recurring improvement, an investment mix allocation change was implemented
- Finally, there was also a strategy shift to target the most profitable customers

Case study – Pricing Strategy

Using analytics to reshape pricing strategies



Challenge

Years of inorganic growth and sales led customer negotiations to tailored pricing across trade customers, resulting in large and difficult to defend price variance across customers. Pricing differences between accounts exposed this CPG client to downward pressure on pricing when trade partners consolidated or buyers moved retailers

Existing pricing and trade terms structure were not compliant with internal accounting standards

Approach

Deloitte developed a consistent, commercially justifiable list of pricing and trading terms. The potential impact of new pricing and terms on customers was assessed and a high-level roadmap for execution was established. The business is supported in the preparation for the implementation of the new pricing and trading terms

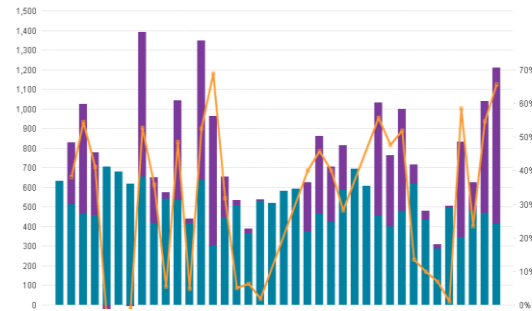
- Benefits**
- Single common list price for each product
 - Revised 'pricing waterfall' and trade terms framework
 - Customer and product level impact analysis
 - Trade communication strategy
 - High-level implementation roadmap



Case study – Trade Promotion Effectiveness

Building a shared reporting and analysis solution that allows for trade promotion evolution

Trade promotion analysis



Account performance



Budget analysis



Challenge

A client's desired end state with regard to BI was a single integrated and shared reporting and analysis solution; delivering value in a single version of the truth throughout the organization. As part of this solution they wanted to gain insight in trade promotion effectiveness through two key dimensions, promotional performance and promotional planning. This case was executed for a CPG client

Approach

Interviews within the company showed that trade promotion management & evaluation is not a focus on corporate level, but very important on regional level. In order to create a cohesive overview into trade marketing effectiveness across different dimension (regions, channels, categories, products & sales person) Deloitte had to tie several data sources together, such as GFK panel data, Nielsen scanning data, IRI data and the client's own factory data

Results

- A tool that allows the client to evaluate trade promotion performance. This way they can evaluate the success of promotions and the drivers behind it
- A tool that allows the client to evaluate trade promotional planning. As a result they can easily gain insight into what they are executing according to the year's promotion plan and whether the trade promotion spend and discounts are in check with planning & budget

FMCG Analytics Framework – Manufacturing



FMCG Value Chain – Manufacturing

In the Manufacturing process of the FMCG value chain, analyses are focused on optimizing production processes taking in consideration forecasting, planning, efficiency and risk exposure

Manufacturing



Production Forecasting Optimization

Analyses focus on the evaluation of promotion forecasting based on a measurement framework of forecasting accuracy/error, bias and stability. Improving forecasting accuracy can potentially lead to reductions in excess inventory, lower labour costs, lower expedite costs, holding costs, spoilage discounts and reduced stock-outs.



Asset Analytics

Analyses focus on the prediction of the lifetime of long term assets such as building, large machinery and other structural elements. This is done by calculating the influence of for instance weather, material and usage of the assets.



Production Efficiency

Analyses focus on proactively addressing challenges such as the increase of efficiency and reduction of costs, but also to help identify opportunities for consolidating facilities and determine outsourcing and offshore transfer solutions for international and domestic organizations.



Production Planning

Analyses focus on the support of delivering more scientific and data based real time contingency plans by generating optimal solutions in short time windows after certain disruptions happen.



Workforce Safety

Analyses focus on the identification of the key factors impacting safety related incidents, the design of measurable interventions to minimize safety risk and the prediction of types of person(s) who are most at risk to get hurt.



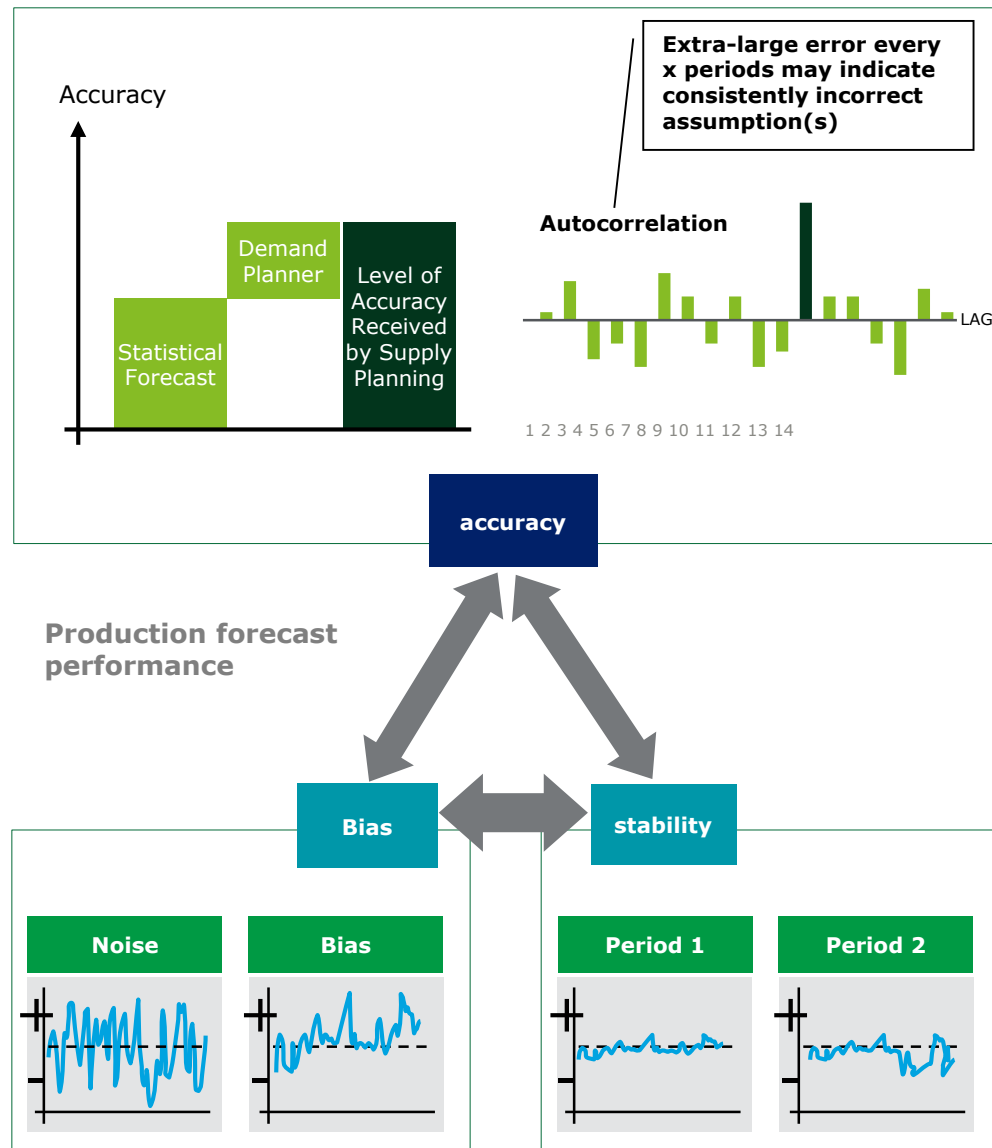
Quality Analytics

Analyses focus on identifying the high impact issues and understanding a facility's past performance. The solution consolidates information allowing a better understanding of the organization's scope drilling down to a single facility to make actionable decisions.



Case study – Production Forecasting Optimization

Production forecasting is a key capability for many manufacturers, improving forecasting performance is vital to improve product stock-out, while decreasing costs due to excess inventory



Challenge

Accurate forecasting is a key ability to ensure competitive advantages for every manufacturer. Improving forecasting capability should be a continuous effort in which periodic or continuous forecasting performance evaluation is an important element. Forecasting demand in FMCG is challenging due to three main reasons: (1) noise and volatility of demand in market (2) introduction of new products and (3) product promotions

Approach

Promotion forecasting evaluation is performed based on a three-pronged measurement framework. Performance is measured in terms of (1) forecasting accuracy (or forecasting error), (2) forecasting bias and (3) forecasting stability. For each of these measurements, several metrics exist and care should be taken to use the most suitable performance metric

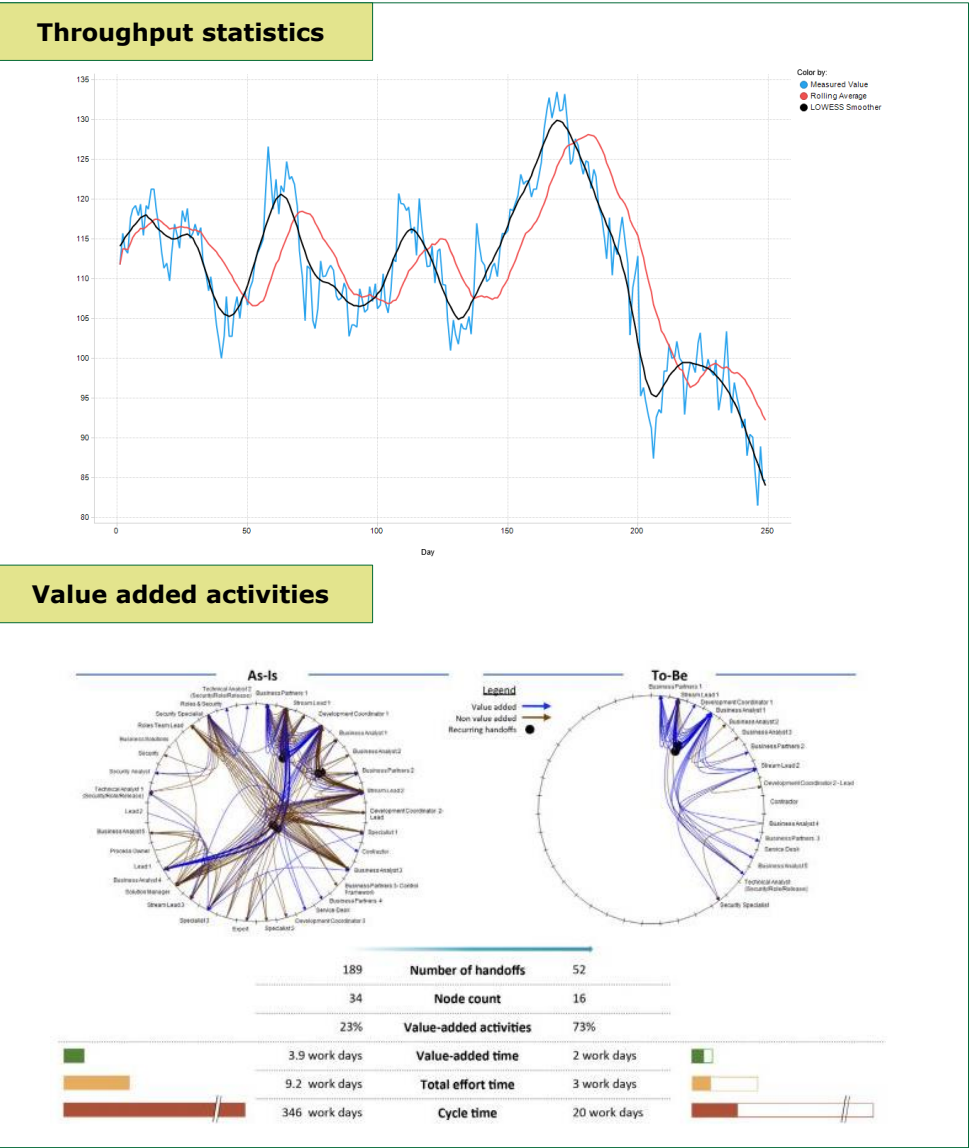
Results

Improving forecasting accuracy can lead to reduction of excess inventory, lower labor costs, lower expedite cost, holding cost, spoilage discount and reduce stock-outs



Approach – Production Efficiency

Analytics is imperative to quickly and comprehensively evaluate your production process, identify opportunities for improvement and customize solutions that quickly drive measurable results



Challenge

At any stage of a company’s evolution, improving operating performance is important. Lean methodologies applied to nearly any organization enable an efficient and lean enterprise. Analytics can support manufacturers to proactively address the challenges they face today. If applied correctly, analytics can become a major driver for Lean Six Sigma and other process improvement disciplines seeking to increase efficiency and reduce costs

Approach

Analytics assist management teams to devise the appropriate process control strategy and support its implementation.

Different methods are applied to uncover potential inefficiency and cost reduction opportunities such as:

- Outlier detection
- Predictive modelling
- Scenario modelling
- Optimization & simulation

Results

Key results of production efficiency analytics include;

- identifying opportunities for consolidating facilities, outsourcing and off shore transfer solutions
- identifying unprofitable product lines for manufacturing operations
- reducing idle time for production facilities
- reducing defects and waste

Case study – Workforce Safety Analytics

Thorough understanding of the dynamics of workplace incidents through the use of advanced analytics



Challenge

Traditional safety analytics defines the scale of the safety problem, but routinely lacks the insights as to why those safety events occur. A strategic safety profiling analysis can:

- Objectively identify the key factors and behaviours that impact safety related incidents and then design measurable interventions to minimize safety risk
- Use the profiling model to predict which type of person(s) will get hurt and which employees are most at risk

Approach

Over 1.000 unique employees over three years of employee or contractor related data sets have been analysed. Next, a model is estimated based on this data and the results have been visualized in a dashboard

Results

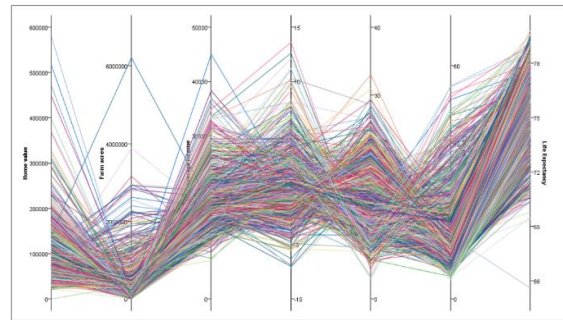
- Reduced overall safety risk profile and associated disruption costs
- Actionable and targeted recommendations regarding what operational changes to consider to help minimise incidents
- Ability to track, measure and report of the effectiveness of the safety compliance program and internal efforts to minimise risk

Case study – Asset Analytics

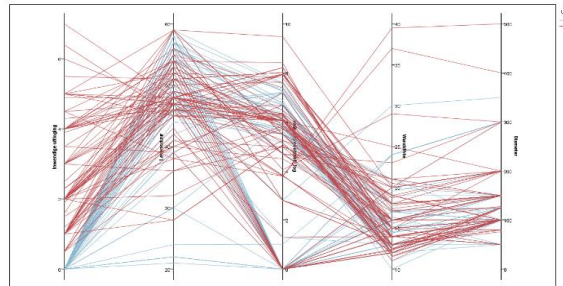
Asset Analytics enables effective decision making by identification and quantification of asset-related risks



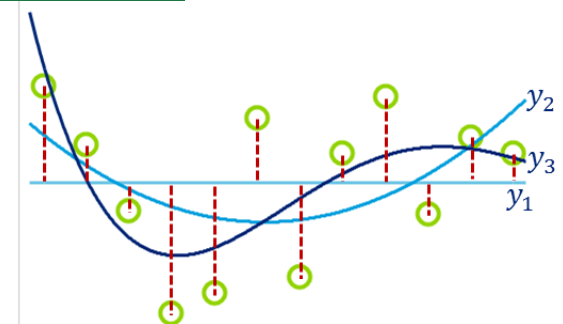
Data exploration



Pattern recognition



Model evaluation



Challenge

For a water distribution utility company, Deloitte developed a model to predict maintenance of pipes. Asbestos cement pipes may fail due to deterioration caused by lime aggressive water, in combination with other factors such as traffic loads, point loads and root growth. Errors could have major consequences for the water utility, customer satisfaction, safety and the environment

Approach

During a five week project, asset data such lime aggressiveness of the water, diameter, wall thickness and age of the pipes was combined with geographical data such as region, soil type and pH and groundwater level. Based on this dataset, 3 predictive models were trained and evaluated to predict the deterioration of the cement pipes due to lime aggressive water

Results


The analysis revealed which asset properties and geographical variables were most informative in the prediction of pipe failure. Combined with information about the consequences of pipe failure, a quantitative risk model for the failure of cement pipes could be developed

Case study – Production Planning

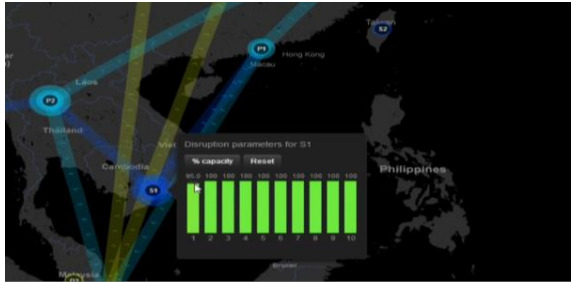


By taking into account certain production planning variables this analysis enables real time contingency planning for a complex, multi-layered network in case of disruptions

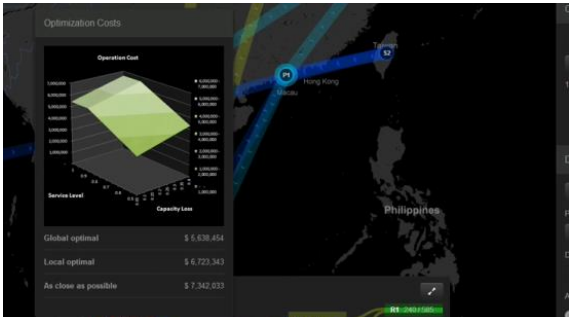
Network visualization



Real-time contingency input



Trade-off evaluation



Optimization Costs	Value
Global optimal	\$ 5,036,454
Local optimal	\$ 6,723,343
As close as possible	\$ 7,342,033

Challenge

Analytics is supporting production planners to proactively address possible unforeseen planning challenges. This analysis enables real time contingency planning for a complex, multi-layered supply chain network when certain disruption happen by taking into consideration information about cost, service level, and historical disruption durations

Approach

An optimal routing plan for a supply chain network is generated under normal conditions using network programming with the following input: manufacturing costs, capacity and the customer demand of retailers. Disruptions are real-time resulting in a better suited contingency plan, which enables cost reductions

Results

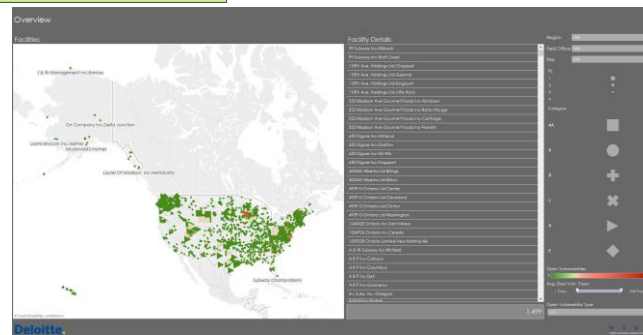
Compared to traditional predefined contingency plans, a real time contingency plan is set-up (also incorporating the considerations of current supply chain status, including initial stock, utilization rate, etc.) to achieve the expected customer service level with cost efficiency

Case study – Quality Analytics

Quality Analytics enables to filter to high impact issues and understand a facility's past performance



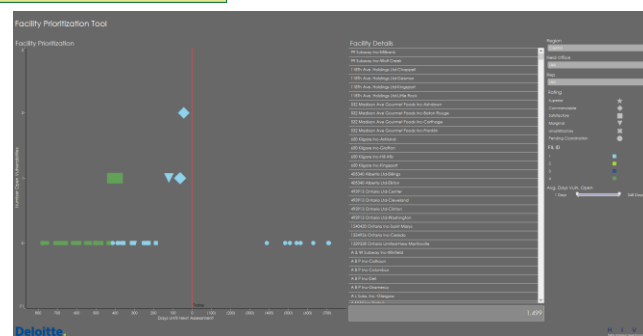
Facilities overview



Region overview



Facility prioritization tool



Challenge

The client was an organization responsible for assessing the security compliance of a large number of organizations. Disparate reporting and data collection techniques made it difficult for staff and leadership to prioritize action and identify problem areas

Approach

The dashboard gathered all facility information consistently, provided the ability to filter to high impact issues and understand a facility's past performance. The solution consolidates all the organizations information that allows the user to understand the scope of their organization while also being able to drill down to a single facility in order to make actionable decisions

Results

The solution provides views for the three types of individuals in the organization (Representative, Field office, and Regional Manager) as well as prioritization tools and facility details. The tool allows an individual user to focus on high priority facilities, but with changing definitions of priority. In addition each user can see all the information they need to understand the scope of their assignments and make decisions

FMCG Analytics Framework – Logistics



FMCG Value Chain – Logistics

In the Logistics process of the FMCG value chain, analyses are focused on optimizing delivery, shipments and warehousing performances

Logistics



Location Analytics

This type of analysis helps solve the problem on what the optimal location is for a certain facility, based on geographical data. As an example, the fire department would want their facilities to be spread throughout a city, so that a fire at any point in the city can be reached with an acceptable response time.



Inventory Diagnostics

What is the optimal inventory level that on the one hand makes sure that the customer receives their goods on time, and on the other hand ensure that the holding and ordering costs are as low as possible? The goal of the analysis is to solve this problem for the client.



Resource & Route Optimization

The goal of the model is to optimize the available resources and truck routes. This is executed to maximize profitability by implementing the new optimized route planning model which leads to a reduction of the resource usage.



Supply Chain Diagnostics

Supply chain diagnostics aims at enabling and improving the ability to view every item (Shipment, Order, SKU, etc.) at any point and at all times in the supply chain. Furthermore its goal is to alert on process exceptions, to provide analytics, and to analyse detailed supply chain data to determine opportunities of cycle time reduction.



Fulfilment Intelligence

Focuses on increased reliability of purchase order submission process until delivery. Analysing supply chain for identification of common or consistent disruptions in fulfilment of orders. Reliability is key, even more so than speed.



Reverse Logistics

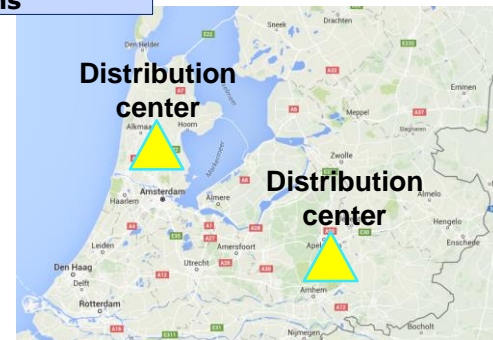
In case of malfunctioning products, companies have to deal with the process of reverse logistics. By getting more detailed insights in the costs of this process, companies can have a better focus on how to reduce these costs.

Approach – Location Analytics

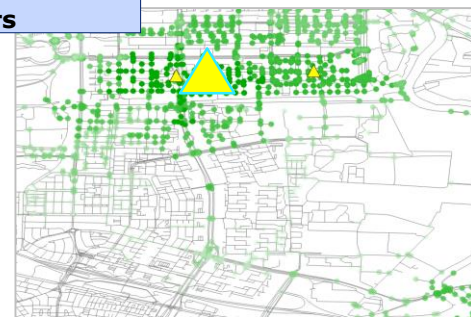
Find whitespots in distribution centers locations



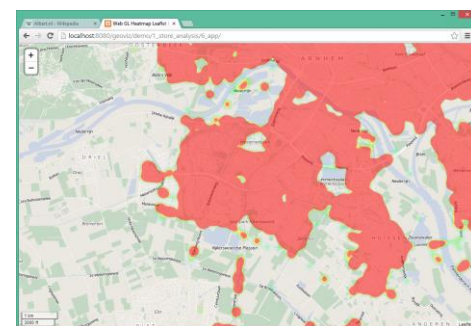
Current distribution locations



Determine travel-time to centers



Visualize and monitor results



Challenge

A company in the Netherlands wanted to expand their business. They want to improve delivery times to the store location by creating one or more extra distribution centres in the Netherlands. The centres should be placed in locations such that they get maximum value in lower delivery times, now and in the near future

Approach

For the approach we start from the current distribution centre locations. From these locations we can calculate the traveling time to stores using Dijkstra's algorithm. This gives us for each location on the map the travel time to a distribution centre. These results can then be visualized in a heatmap to immediately locate whitespots in the store distribution. Furthermore an optimization algorithm was run to determine the optimal distribution of distribution centres

Results

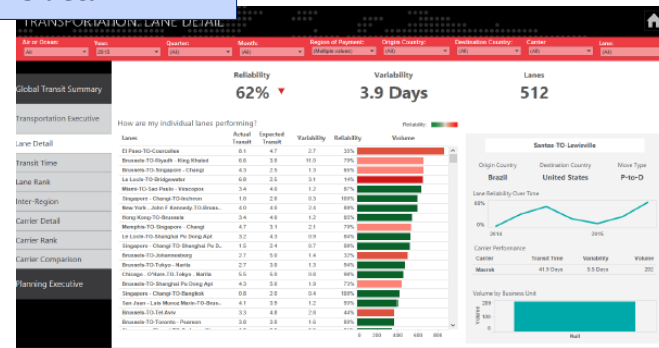
- With our results and the new locations the fire departments were able to:
- Significantly reduce the response time, saving lives and reducing costs at the same time
 - Reduce the total number of fire departments, while giving better response time performance

Case study – Inventory Diagnostics

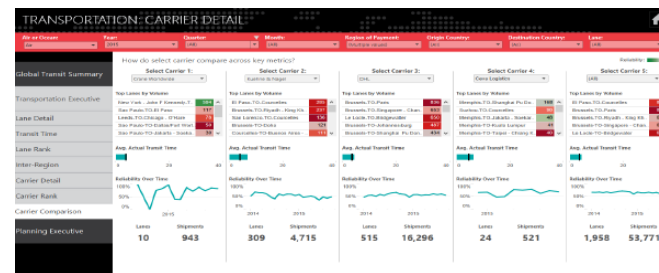
Delivering a robust and user friendly Global Transit Planning Tool



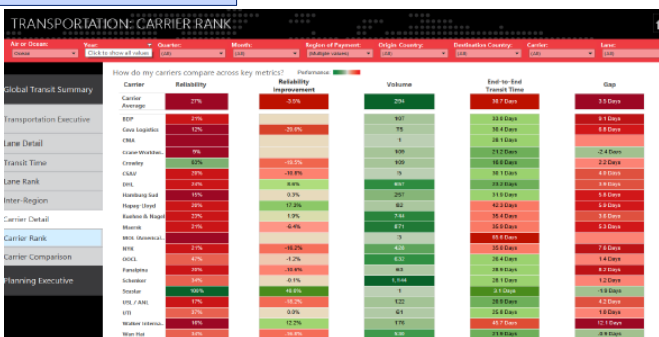
Lane detail



Carrier rank



Carrier comparison



Challenge

To empower transportation personnel to more efficiently analyse ocean and air supply chain shipment data, a global operating company internally designed a Global Transit Planning (GTP) tool in Tableau. However, the tool did not achieve high user adoption, since analyses were not intuitive and high manual data updates were required

The Deloitte team was asked to enhance the tool and incorporate a robust data blending process

Approach

Enhancing the GTP dashboard and blending the data was achieved in four subsequent phases consisting of: research, visioning, prototyping and iterating

In the prototyping phase, the team built and refined the dashboards and wrote a Python script which indicates how the various data sources should feed into the unified view of data

Results

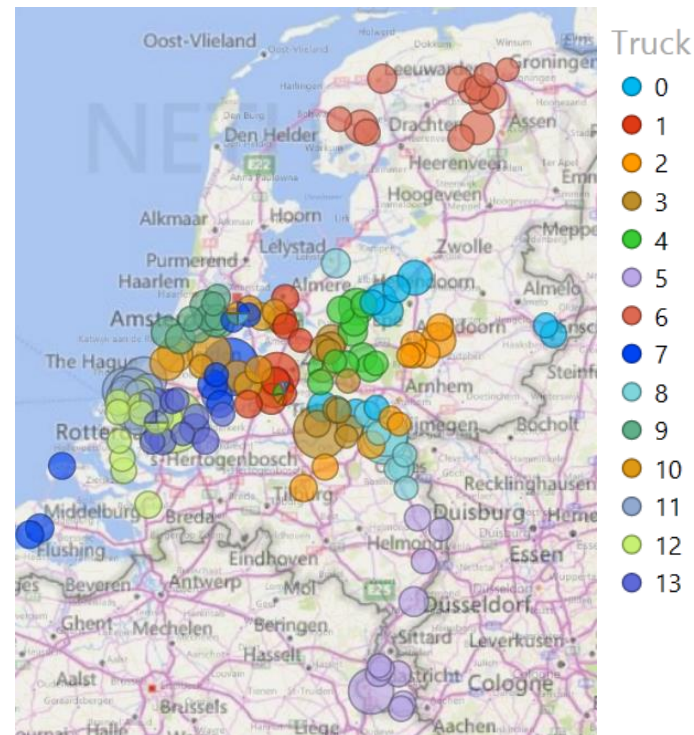
The existing GTP tool was adjusted to provide maximum flexibility, automation and collaboration. The user flow allows users to interact in one cohesive interface, while providing tailored information to their specific role. The redesigned GTP tool is now well adopted within the organization and used on monthly basis to enable more effective inventory planning decisions, resulting in the gradual and continuous reduction of in-transit inventory

Case study – Resource & Route optimization

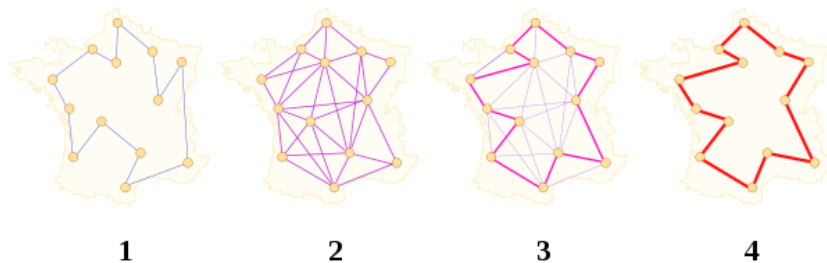
Maximizing profitability by optimizing resource planning and route optimization



Clear understanding of all steps



Optimization process



Challenge

A Dutch client that handled waste disposal for large companies struggled with its profitability. After analysis it was confirmed the one of the key issues was the suboptimal resource planning. Resource planning of trucks and drivers was done manually, even sometimes by the drivers themselves. The client asked Deloitte to develop and system for finding optimum routes for their trucks

Approach

First Deloitte created an overview of all different customer locations, the number of available trucks per location, the working hours, pickup points. Next we calculated the drive time matrix between the different locations. Subsequently Deloitte created a model that would use a customized 'cost function' in which weights could be given to driving time and driving distance. The cost function would then be optimized and by doing so, providing the optimal routing for each truck for each day

Results

The model Deloitte created was able to plan to optimal routes for the different trucks much faster and efficiently than the client was able to do. The new route planning model showed that it was possible to significantly reduce resource usage – it was possible to sell trucks without loss of client service and satisfaction

Case study – Supply Chain Diagnostics

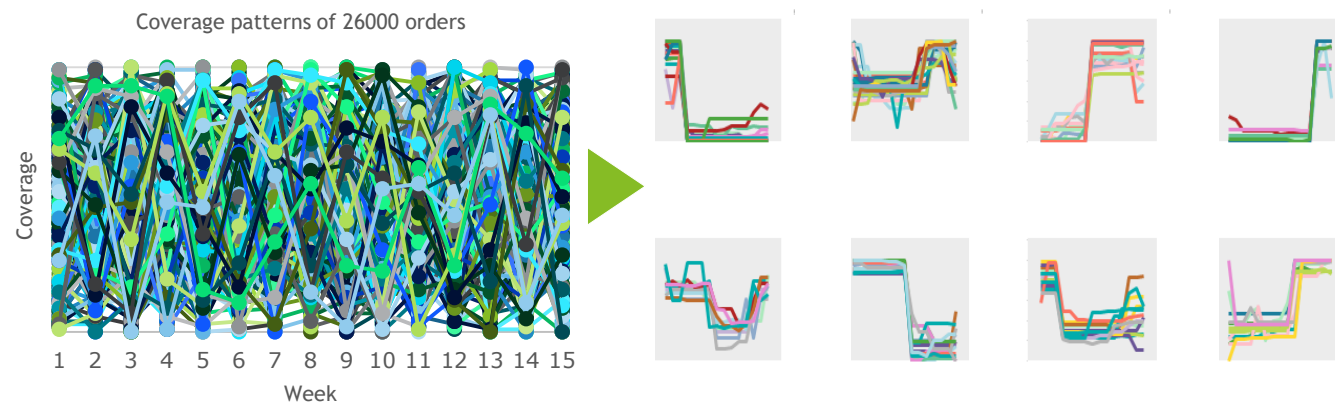
Provide insight into key drivers of delivery in full and on time and improving coverage throughout the supply chain



Clusters of coverage rates and insights visualized in a dashboard



Collected coverage patterns transformed into the identified clusters



Challenge

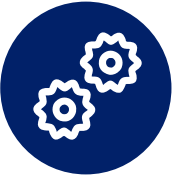
In this particular company, millions of products are continuously being produced and shipped to distribution centres around the globe. In order to satisfy customer demand in time, it is necessary that the coverage is in order, i.e. the percentage of the products that arrives at the distribution centres on time and in full. In order to improve the coverages and meet the set targets, the company wanted insight into the drivers that most influence the coverage and eventually also the delivery in full and on time. Therefore they asked Deloitte to perform a detailed analysis on their data

Approach

Collected the '15 week coverage rate' for full year of orders. A clustering technique was used to cluster 26,000 coverage rates. This technique groups the coverage patterns in buckets of similar patterns, which then comprise a single cluster. Eight buckets of different coverage patterns were visualized and these buckets gave insight in the drivers of the coverage for the orders

Results

- Extracted key insights with incremental business potential such as:
- Carrier performance has the largest impact on the coverage
 - Good coverage is usually caused by slack in factory performance
 - Identified significant number of orders that were only slightly (1–7 days) late and could be quick wins
 - Actionable insights to improve process and areas of the order pipeline



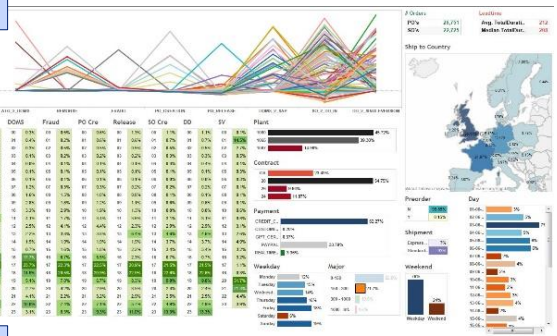
Case study – Fulfilment Intelligence

Gaining insights into the digital order pipeline to improve order fulfilment and speed of delivery

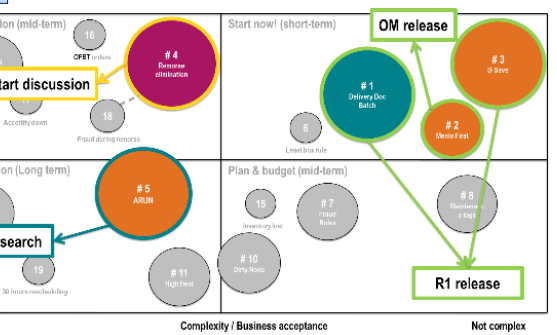
Clear understanding of all steps



Deviation from reference time per order per step



Optimization opportunities



Challenge

Over the last years, online sales channels have become more and more important for companies. With the increase of online channels, however, customers have become more demanding in terms of delivery time and service. Reliability is therefore extremely important, even more so than speed. Therefore a large company asked Deloitte to create a clear picture of the Direct-to-consumers online purchase order submission process through the different systems and increase the reliability of this process

Approach

Of the 70,000 total submissions, roughly 70% was completed within the allowed time. 22% was completed at around roughly twice the maximum amount of time, 7% within about 6 times the maximum and 1% took even longer. The analysis was focused on the group that was completed in twice the maximum time (22%) which held the largest opportunity to identify the delay drivers. Timestamps were created for different stages in the order submission process combined from multiple source systems. A clustering on deviation from the reference per time stamp was performed

Results

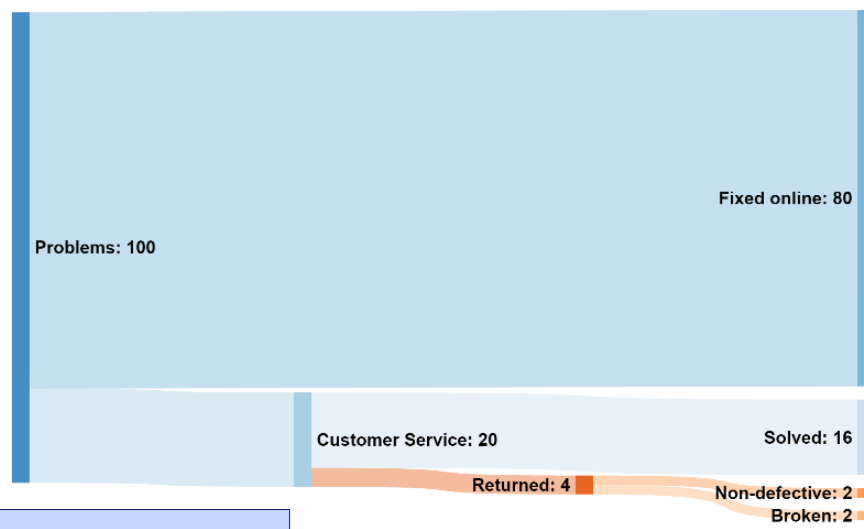
The analysis led to the identification of several steps within the process that could be improved with low effort for a relatively high gain. In total more than 20 improvements were made based on the analysis results, leading not only to a more reliable order submission process, but also to an average time reduction per order of 50%. As a results, customer satisfaction and loyalty increased

Case study – Reverse Logistics

Reducing costs on reverse logistics by analysing end-to-end process



Sankey diagram of product flow



Challenge

A global technology firm struggled with high costs on their service logistics. The scope of service logistics consisted of shipping parts to client sites and take care of returning the defective parts to global re-manufacturing sites. Clients were served with premium service levels (i.e. <4 hour recovery). Deloitte was asked to make a fact based assessment of the service logistics process and advice how costs could be reduced

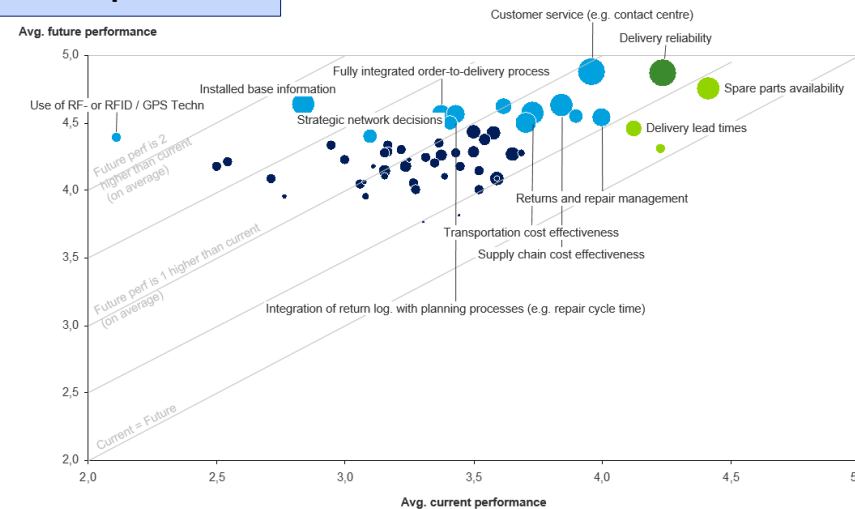
Approach

During the process the reasons why customers contacted the service desk were analysed, it turned out that 80% of the problems could be resolved by online support. From the remaining 20%, 80% of the problems could be resolved by the second line support. For the 4% that could not be resolved this way, a replacement needed to be sent. After inspection, it turned out that half of these returned units actually did not have any malfunctions

Results

The result of the analysis was that the main opportunity for savings was not in the cost for logistics (driven by the stringent service levels and unpredictable failure rates), but was found in avoiding cost (i.e. reducing the number of replaced products that turned out to be non-defective). This savings should be realized by continuously improving online information and the customer services departments

Overview of quick wins



FMCG Analytics Framework – Business Management & Support



FMCG Value Chain – Business Management & Support

In the Support process of the FMCG value chain analyses are focused on determining potential improvements in the organization

Business Management & Support



Workforce Analytics

Encompasses workforce planning and analytics across all phases of the talent lifecycle. The workforce planning component provides insights and foresight into addressing current and future talent segment related challenges and development. Moreover, this offering applies analytics solutions to key talent processes.



Business Process Analytics

Help clients to understand their risk exposure better, and to proactively identify and mitigate sources of risk on an enterprise scale. Armed with this information, executive management and boards will be better equipped to navigate challenging economic conditions.



Sustainability Analytics

Helps clients with sustainability related strategies such as assessing future environmental and health impacts. Using an overview of the most important resources and an insights in the product lifecycle, a prioritisation can be made which product categories are most at risk and which show the most potential.



Program/portfolio analytics

Enables clients to model their program/portfolio performance y providing fact based insight into the performance of the total portfolio down to project level. Among other things, It allows clients to prioritize projects better, identify potential budget overruns in an early stage and optimize resource allocation.

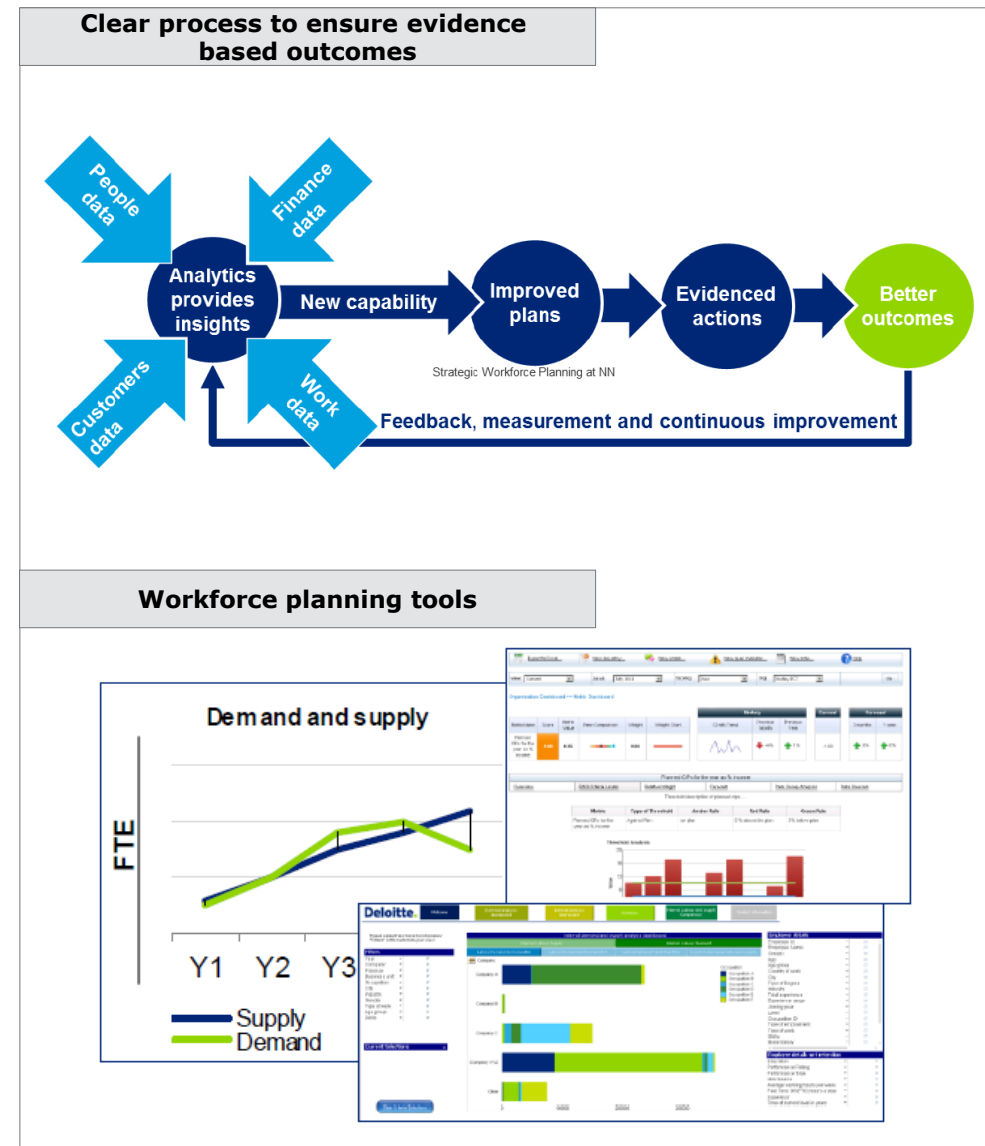
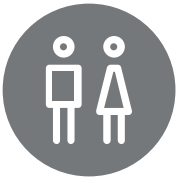


Finance Analytics

- Working capital, spend analytics, double payment, risk and tax analyses
- Helping clients to get control of their financial data, finance analytics enable clients to model business processes and gain deeper insight into cost and profitability drivers.

Case study – Workforce Analytics

Strategic Workforce Planning: planning the talent needed for sustainable growth



Challenge

Clients experience a continuously changing environment in which they have to operate. Within this environment new products and new sales channels are discovered. In order to be able to gain full advantage of these new opportunities a variety of new skills within the workforce are needed

Approach

- Using data from different sources such as People-, Customers-, Work- and Finance data, insights can be derived in:
- Identifying critical workforce segments. Mapping segments/skills that drive a disproportionate amount of value creation in comparison to their peers
 - Identifying current demand drivers and defining a demand model
 - Defining and executing a workforce planning to analyze gaps in the current supply and demand for critical workforce

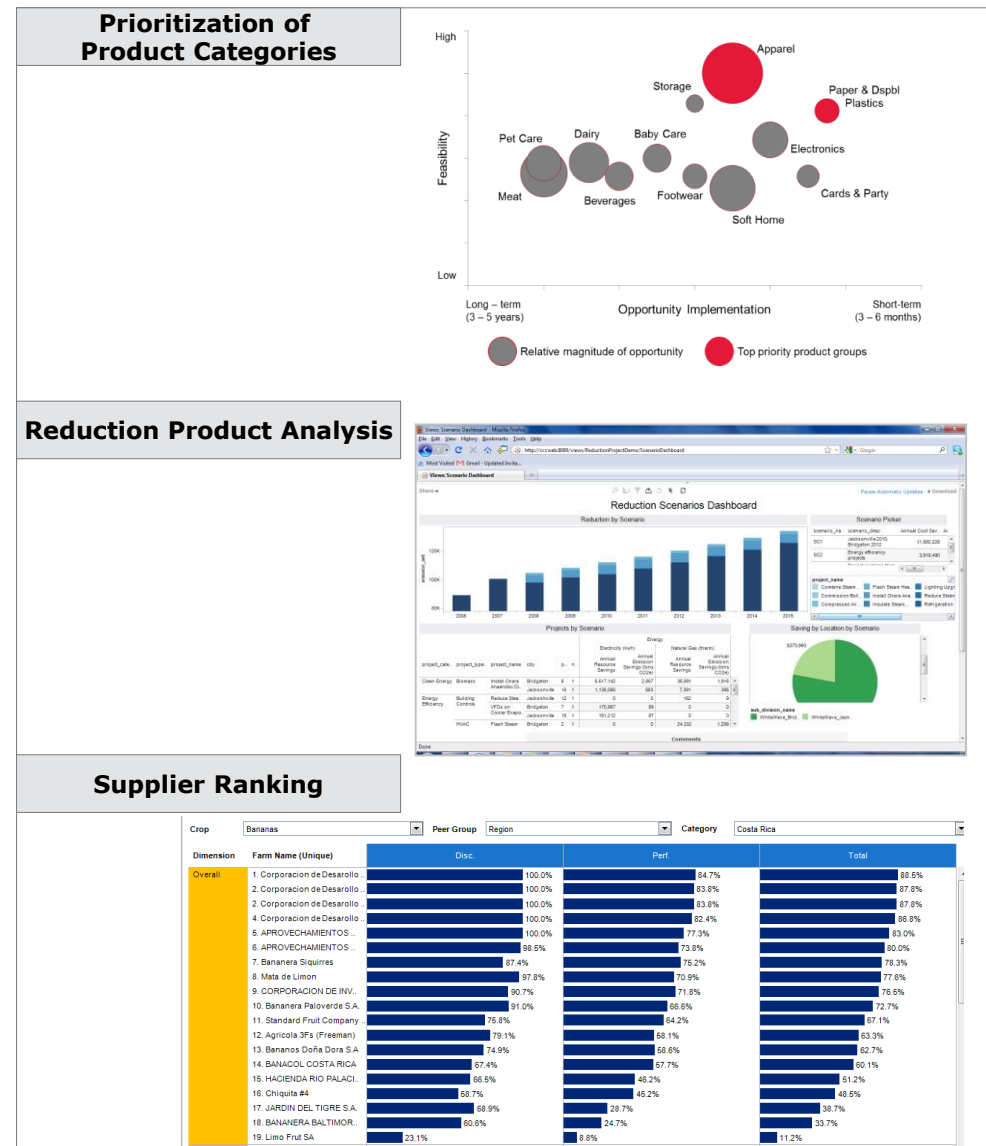
Results

Clients get a view of how they should move from the current workforce to the workforce needed in 5 years from now

The approach used makes sure that clients can use evidence based decision making supported by a variety of fact based workforce planning tools

Case study – Sustainability Analytics

Sustainability analytics enforces company's sustainability-related initiatives



Challenge

Sustainability analytics can help companies reduce key resource use and at the same time making them less vulnerable to price and supply volatility. Future risks and opportunities can be identified in areas such as environmental and health impacts – both within the organization and across the extended supply chain. The challenge lies in generating the most influential insights from relevant data. These insights are necessary to develop sustainability related strategies and to improve overall (resource use) efficiency

Approach

The approach is divided into three actions:

- Develop a normalized and comprehensive view of resource use to understand (and prioritize) the hot spots
- Conduct a comprehensive analysis of products/services lifecycles to quantify the risks/opportunities
- Align/develop a sustainability strategy using the results of the executed analyses

Results

- Prioritization of product categories: an identification of the top product categories and a prioritization of categories with most improvement potential
- Reduction product analysis: Development of an implementation strategy and value propositions for the opportunities of the highest prioritized product groups (how to reduce costs, increase customer preference and reduce risk)
- Supplier ranking: Ranking of suppliers based on sustainability performance to create individualized “sustainability report cards” which can be integrated in category buying decision making

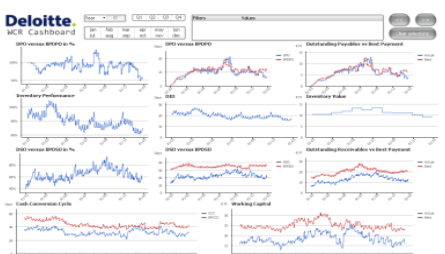


Case study – Working capital

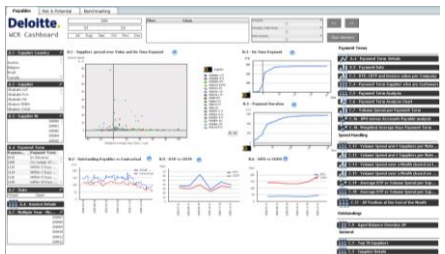
“The Dash for Cash”: Using the Deloitte WCR Dashboard to drive sustainable performance improvements in working capital

WCR Dashboard

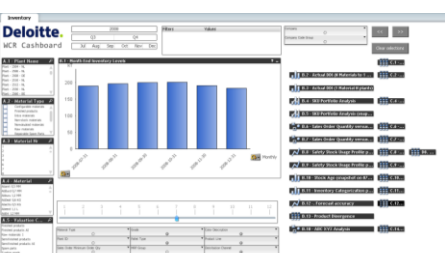
Cash-Conversion-Cycle



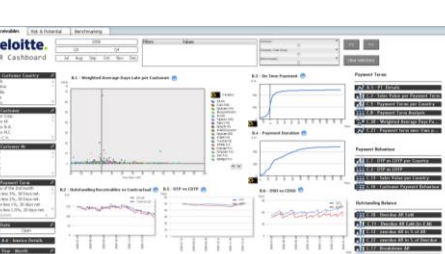
Payables – Purchase to Pay



Inventory – Forecast to Fulfill



Receivables – Order to Cash



Challenge

As companies try to stay their course in the downturn and beyond, cash is back as king. Working capital is one of the few remaining areas which can rapidly deliver a significant amount of cash to a business without a large restructuring program

The client asked Deloitte to help in the challenge to free up working capital. Reducing working capital in the short term is fairly easy; making reductions sustainable and changing the mind-set in operations to that of a CFO is more difficult

Approach

To enable sustainable reductions, Deloitte deploys a cash-oriented, entrepreneurial approach to working capital management that focuses on concrete actions and creating a “cash flow mind-set” to shorten the cash conversion cycle. The Cashboard™ is a flexible & configurable dashboard that is powerful but still exceptionally easy to use. As such, it allows frontline operations staff at companies to zoom in on the key opportunities, risks, trade-offs and root causes

- Results**
- It enables continuous monitoring of the working capital levels throughout the entire company – including all Business units and all geographies
 - The interactive environment enables context driven analysis by time, customer, product, business line etc.
 - Real time insight into current performance
 - Easily adjustable and expandable to your company’s specific needs

Case study – Spend Analytics



Deloitte Spend & Procurement Analytics provides deep insight in the composition of the volume of spend and identifies key savings opportunities



Challenge

The client was struggling with identifying improvement opportunities because of inaccessible information. As a result, the client was unable to drill down and analyse individual orders and problem solving was limited to the strategic level

The client asked Deloitte to help identify opportunities for continuous improvement for cost reduction and provide additional insights into the spending trends of the organization

Approach

Our Spend & Procurement Analytics approach facilitates short time-to-deploy and delivers easy-to-use insight and contains these key components:

- Easy upload of procurement data through standard interfaces
- Engine to create a bottom up calculation of your company's most important Spend KPIs
- Interactive dashboard enabling context driven analysis by time, supplier, product, business line

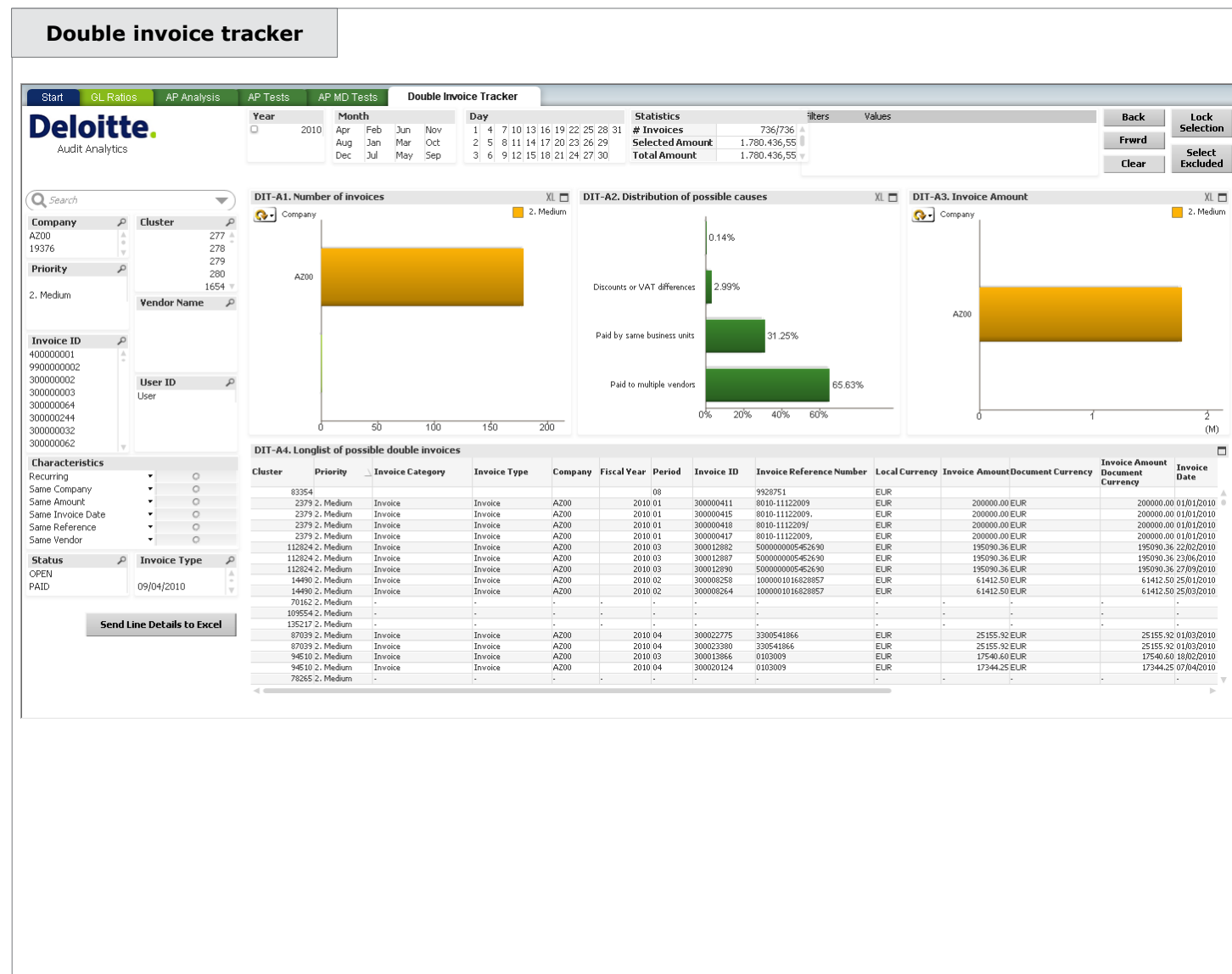
Results

Through the Spend & Procurement Analytics Dashboard efficiency and savings opportunities can be identified in several areas:

- Improve process efficiency by identifying fragmented spend and invoicing
- Identify and expel maverick buying
- Negotiate better contracts
- Reduce costs by optimizing the purchase to pay process

Case study – Double Payments

Because paying once is enough!



Challenge

Who pay their invoices twice? Well, for one, all major organizations in 1% of the cases. They usually know this but have no means for pinpointing exactly which invoices are paid twice

Many organizations check for invoices paid twice, but rarely detect them all. This can be caused by inaccurate master data or errors due to invoice entries. The organization asked Deloitte to help in detecting double payments in a better way

Approach

The Deloitte Double Invoice Tracker examines all individual invoices, over multiple periods in full detail. The Invoice Tracker detects inaccuracies in the master data by using specially designed algorithms.

By cleverly cross-referencing inaccuracies in the master data with those in the invoice entries, the Double Invoice Tracker can find lost cash and insights into the master data quality

Results

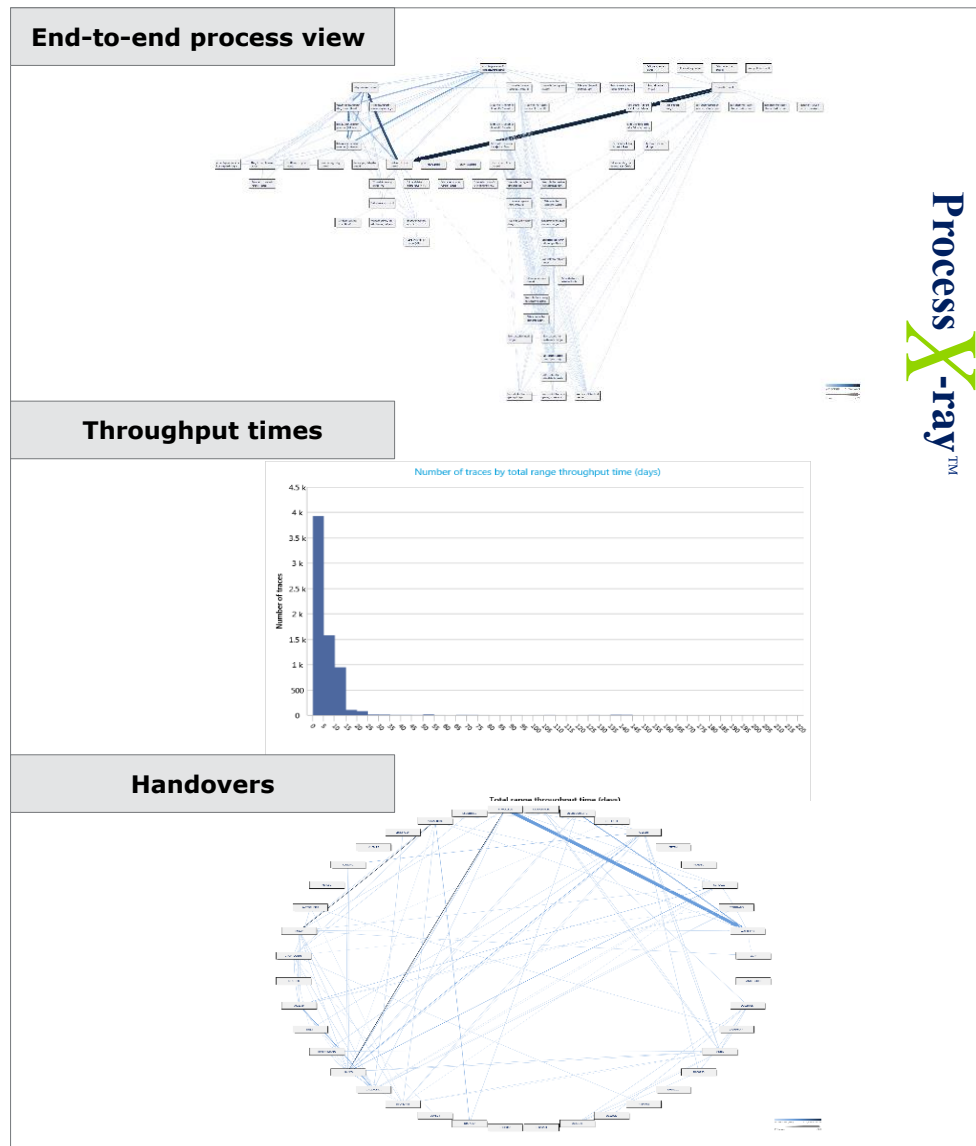
The Deloitte Double invoice tracker saves money and helps improving master data quality, by giving:

- An overview of all the invoices paid twice, including supplier information, so the restitution process can be started immediately
- Insights into the master data quality
- Insights into the aggregate purchasing expenditures and how these are divided

Solution – Business Process analytics



Deloitte's process analytics solution Process X-ray reconstructs what really happened in the process and provides the capabilities to find the root cause



Challenge

Process variation is at least 100 times greater than clients imagine. In fact, 5,000 or more variations are common in most end-to-end processes. Such high levels of variability are a natural enemy of scalability, efficiency, and process control

Process execution is facilitated by different departments and functions, making it difficult to get an end-to-end view of the process

Approach

Process analytics provides visibility of what is really happening based on the actual event data captured in transactional systems. This is far different from the subjective recollections or assertions of people

It provides end-to-end visibility of the process, tearing down the walls between functions and departments and providing an internal benchmark

Process analytics offers the scalability to analyze large volumes of transaction data from different systems (SAP, Oracle, JDEdwards, Salesforce, etc.)

Results

Organizations can benefit from iPL by:

- Reducing operational cost
- E.g. identify and reduce rework activities
- Increasing control & compliance
- Monitor segregation of duties
- Reducing working capital

Solution – Program Portfolio Analytics

Deloitte's iPL solution enables timely monitoring by disclosing project portfolio performance anytime anywhere



Deloitte's iPL

<p>Portfolio management</p>	
<p>Finance</p>	
<p>Resource management</p>	
<p>Planning & Scheduling</p>	

Challenge

Typical challenges that an organization faces relating to monitoring the portfolio performance:

- Getting performance reports is very time consuming and therefore the frequency of delivering these reports is usually low
- The reports created are static and therefore provide no possibilities to analyze into a detailed level and from different perspectives
- Decision making is mostly based on one dimension only (e.g. time spent)

Approach

Deloitte's iPL solution is aimed at fact based prioritization and tracking of project performance and enables financial, resourcing, risk and issue analyses

iPL combines data from multiple sources and visualizes the results in an interactive analysis environment which can be accessed online

Results

Organizations can benefit from iPL by:

- Prioritizing based on the progress made and effort utilized by projects
- Proactively managing potential underperforming projects
- Better predicting the cost at the completion of the project based current performance
- Resource gap analysis and earned value analysis (budget spent vs value delivered).

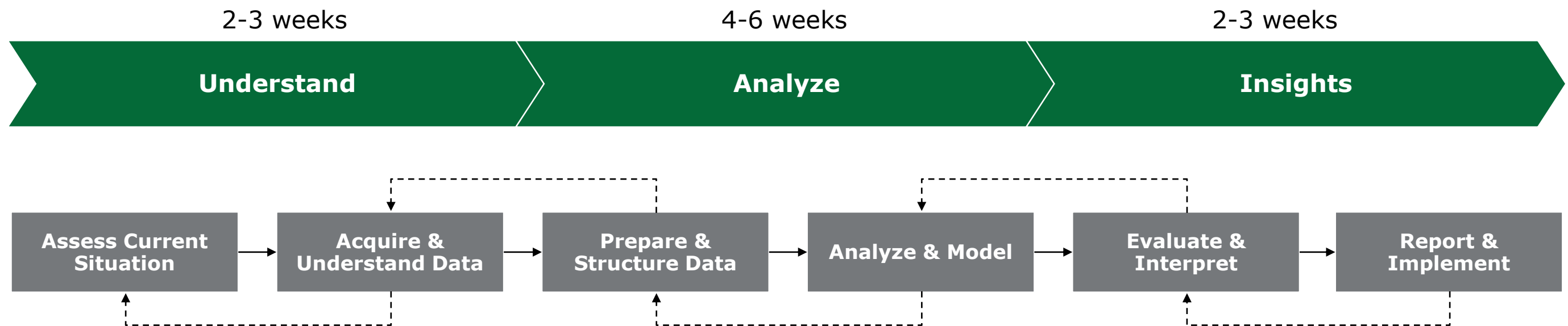
Project Approach



Our Analytic Insights project approach

Our comprehensive and flexible methodology for Analytics projects ensures we can deliver business critical insights within time and budget

A typical Analytic Insights project takes 8-12 weeks following three main phases connected to our approach



Approach

Our structured approach has been built up from our experience in analytical engagements. It comprises of 6 steps to maximize project oversight. Each step allows looping back to previous steps to apply the insights gained in subsequent steps.

Critical success factors

To ensure maximal knowledge transfer in both ways we would need to work closely with key experts in client's business and IT departments. Rapid access to potentially disparate source data and support in understanding the data is essential in order to build up the data structures required for the analytical models.

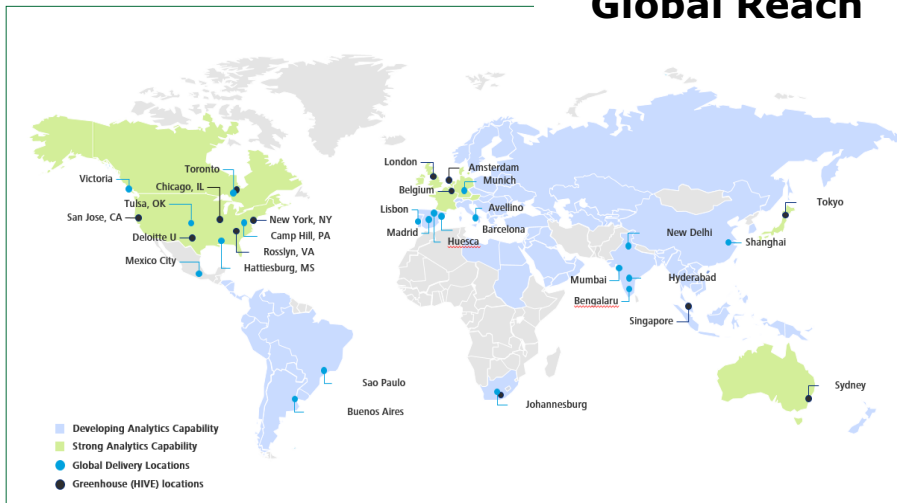
Why Deloitte?



Deloitte maintains a market-leading global Analytics practice with extensive experience in FMCG

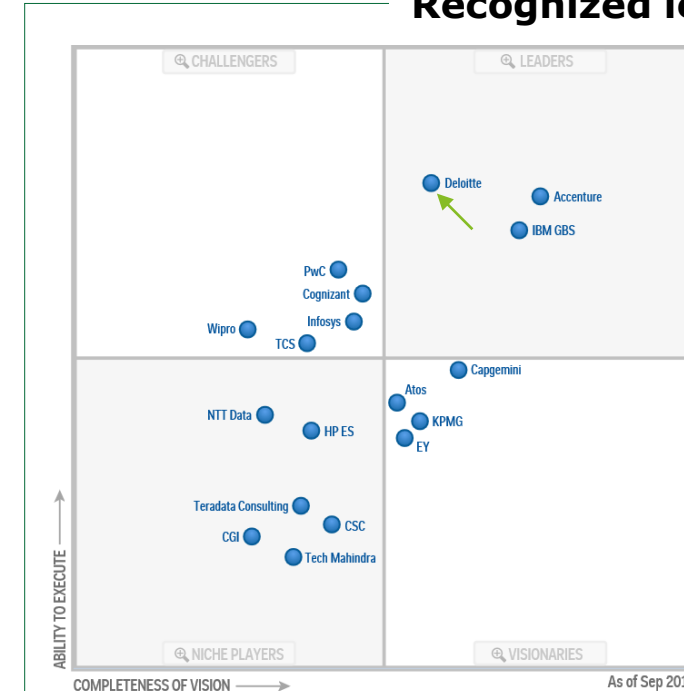
We understand what your challenges are as well as the current and future analytics market, placing Deloitte in a unique position to assist you

Global Reach



- With over **9,000** BI and analytics resources worldwide, we are recognized as one of the leading BI&A service providers
- **Unique combination** of deep industry expertise, analytics capability and understanding of decision-maker's roles to maximize value

Recognized leader in Analytics



- "Deloitte shows **growth** and **innovation leadership** through investment in acquisitions (with 22 analytics-related acquisitions since 2010), technology partnerships, alliances and intellectual property."
- "Deloitte has a strong focus on innovation, including **Deloitte's Insight Driven Organization (IDO)** Framework, breakthrough labs to meet clients' demands, and **Highly Immersive Visual Environment (HIVE)** labs, as well as a breadth of **analytics accelerators.**"
- "All is available through its global network of **21 Global Delivery Centers** and **25 Deloitte Greenhouses.**"

Source: Gartner, Magic Quadrant for Business Analytics Services, Worldwide. September 2015

Vendor independent



- We **recognize the importance** of the right technology, but we also understand the necessity of finding pragmatic and efficient ways to iteratively build the required capabilities
- Our relationships with, and understanding of, technology vendors is strong, covering an impressive range of different products – but, crucially, we remain **vendor independent.**
- We are **focused solely on helping clients** to develop a practical Information and Analytics strategy - incorporating the necessary technologies and introducing the most appropriate vendors.

Deloitte's areas of expertise in Analytics

We have build a wide area of expertise, covering all important streams within the field of Analytics & Information Management

Big Data Management

A clear **vision** is imperative for success, policies, practices and procedures that properly manage the collection, quality and standardization



Big Data Management has to be **future-proof** and **secure**, that connects with more and more **different data sources**; structured, unstructured, internal and external

Big Data is all about **processing huge** amount of **data** using **commodity hardware** that offer better **information**, more **insights** and more **opportunities** for a growing business



Data Discovery & Visualization

Visualization is vital to understand what can be done with data, **storytelling**, **advanced visualization** & **dashboarding** are useful tools to determine what is happening



Dashboarding

Information has to be displayed **correctly, clearly** and **without distraction** in a manner that can be quickly **examined** and **understood**.



KPI Frameworks

Visualization

It allows the user to view both simple and complex data at a glance and **see abnormalities**, **dependencies** and trends that would not have been apparent in tables



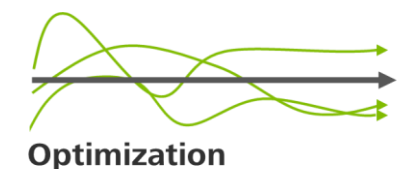
Advanced Analytics

Understanding the data is key to advance to the next level, nowadays more **advanced methodologies** allow for an even deeper understanding than ever before



Methodologies such as **Text Mining**, **Segmentation** or **Predictive Analytics** go beyond traditional understanding

This allows for **actionable insights** that have a direct effect on the business and can help the user to understand what is happening and **optimize** their business



Deloitte's approach towards becoming an Insight Driven Organization (IDO)

Considering analytics with a wider lens than just technology

IDO Framework



1. Understand

- What is an IDO?
- Why become an IDO?



3. Align

- Making it Real
- Changing the Mindset
- Trusted Insight



2. Plan

- Vision
- Value Generation
- Organising for Success
- Planning the Journey



4. Act

- Purple People
- The Insight Process
- Predicting the Future
- The Art of Visualisation
- Enabling Platforms

- The application of analytics and its importance will increase in the coming years. The World is increasingly complex and fast moving which makes getting it right increasingly difficult.
- An IDO **asks the right questions** of itself, they are more analytical, which improves the decision making process and the identification of the most appropriate action.

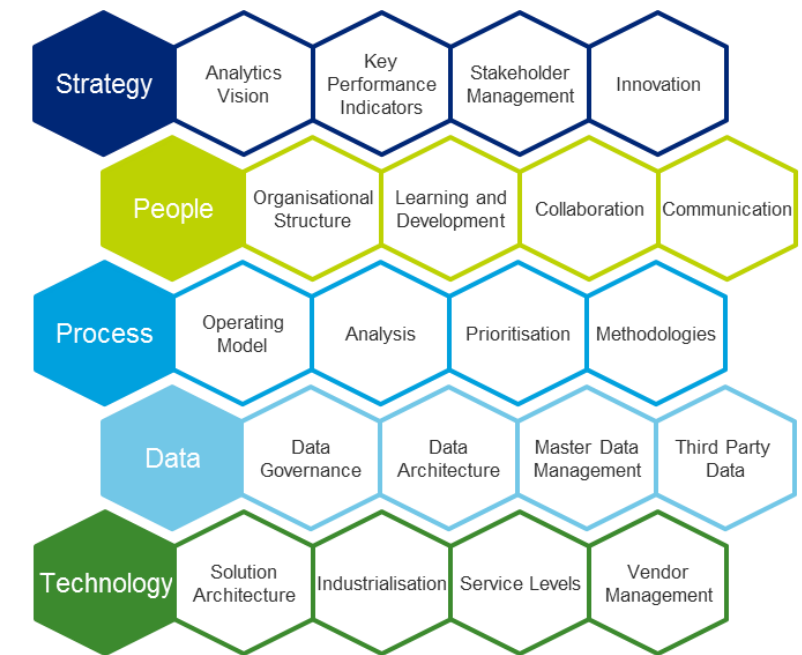
- As an IDO, you could:
- Make the same decisions **faster**
- Make the same decisions **cheaper**
- Make **better** decisions
- Make **innovations** in products and services

Outlook	Non-IDO	IDO
Past	What has happened?	Why and how did it happen?
Present	What is currently happening?	What is the next best action?
Future	What is going to happen?	What does simulation tell us; the options; the pros and cons?

Planning the Journey

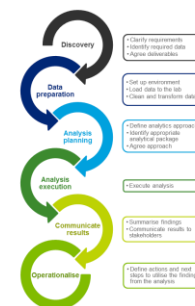
The journey towards becoming an IDO is about **Evolution**, not Revolution. The key principle is sequencing the activities to deliver the **Vision** and **early benefits**, recognizing existing capability constraints.

Becoming an IDO relies on a foundation of the fundamental building blocks of **People, Process, Data** and **Technology**, informed by an **Analytics Strategy**.



Making it Happen

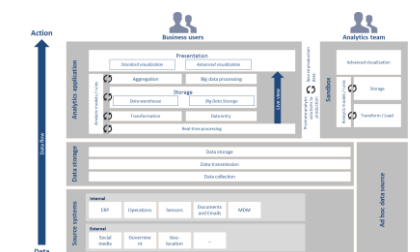
Insight Process



Purple People



Enabling Platform



Deloitte Greenhouse offers different types of immersive analytics sessions

Analytics Lab

The Analytics Lab, hosted in Deloitte's innovative Greenhouse environment, is an inspiring and energetic workshop to uncover the impact of data analytics and visualization for your organization. Participants are provided with a unique opportunity to experience hands-on analytics in a fun and innovative setting, facilitated by Deloitte's industry specialists and subject matter experts.



Art of the Possible

An inspiring two-hour session including analytics and data visualization demos, used as a starting point for an open discussion on the potential impact of analytics for your organization.



Visioning

A collaborative session to wireframe a custom analytics or visualization solution, supporting a selected business challenge. The session is facilitated by Deloitte's user experience, data visualization and analytics experts.

Privacy by Design

Incorporate privacy (and security) in the design process of the data analytics application

Privacy by Design

The Privacy by Design (PbD) concept is to design privacy measures directly into IT systems, business practices and networked infrastructure, providing a “middle way” by which organizations can balance the need to innovate and maintain competitive advantage with the need to preserve privacy.

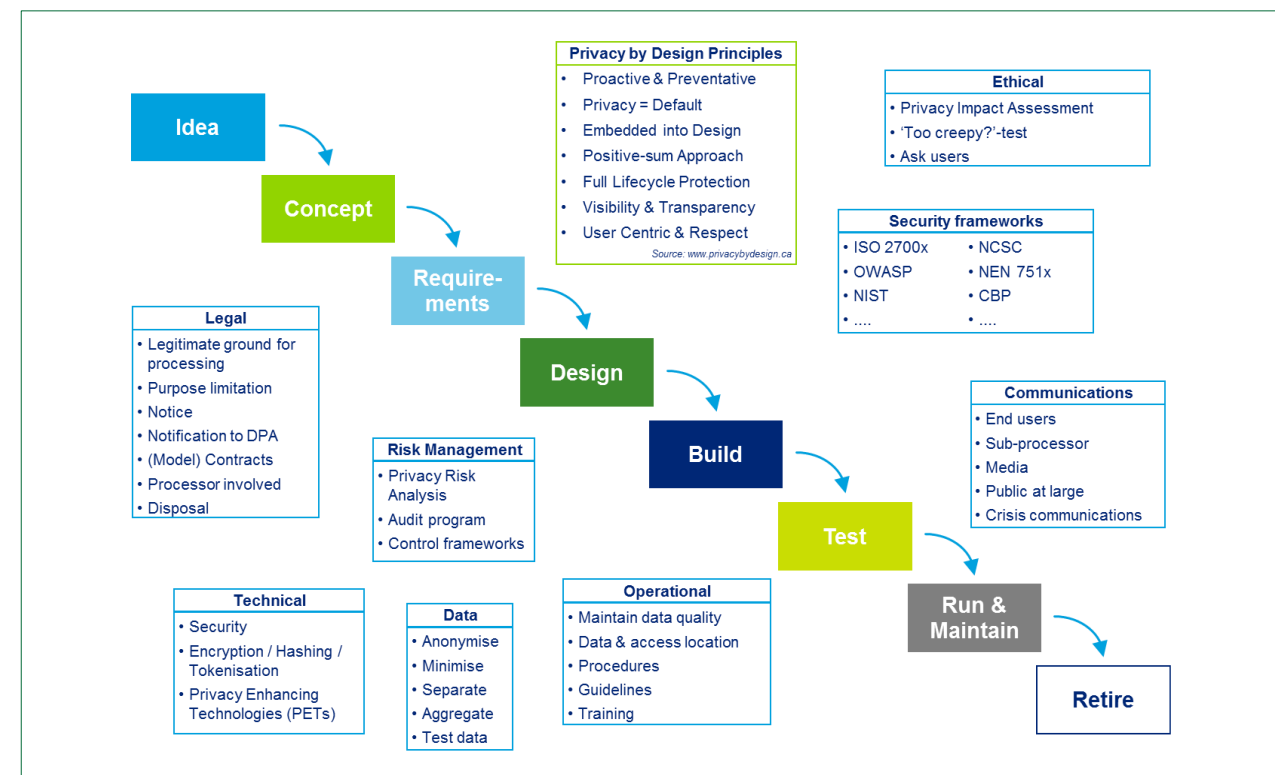
It is no flash-in-the-pan theory: PbD has been endorsed by many public- and private sector authorities in the European Union, North America, and elsewhere. These include the European Commission, European Parliament and the Article 29 Working Party, the U.S. White House, Federal Trade Commission and Department of Homeland Security, among other public bodies around the world who have passed new privacy laws. Additionally, international privacy and data protection authorities unanimously endorsed Privacy by Design as an international standard for privacy.

Adopting PbD is a powerful and effective way to embed privacy into the DNA of an organization. It establishes a solid foundation for data analytics activities that support innovation without compromising personal information.

Deloitte took the basic principles of PbD and built them out into a full method that can be used to apply privacy to almost any design – whether it is IT-systems, applications or products, the latter specifically significant now that the Internet-of-Things is coming upon us.

Reasons

- Effective way to make sure compliance is reached already in the design phase (and maintained)
- Efficient: accommodating privacy enhancing measures is cost effective in the early stages of design
- Time available to do adjustments / look for alternatives



Contacts




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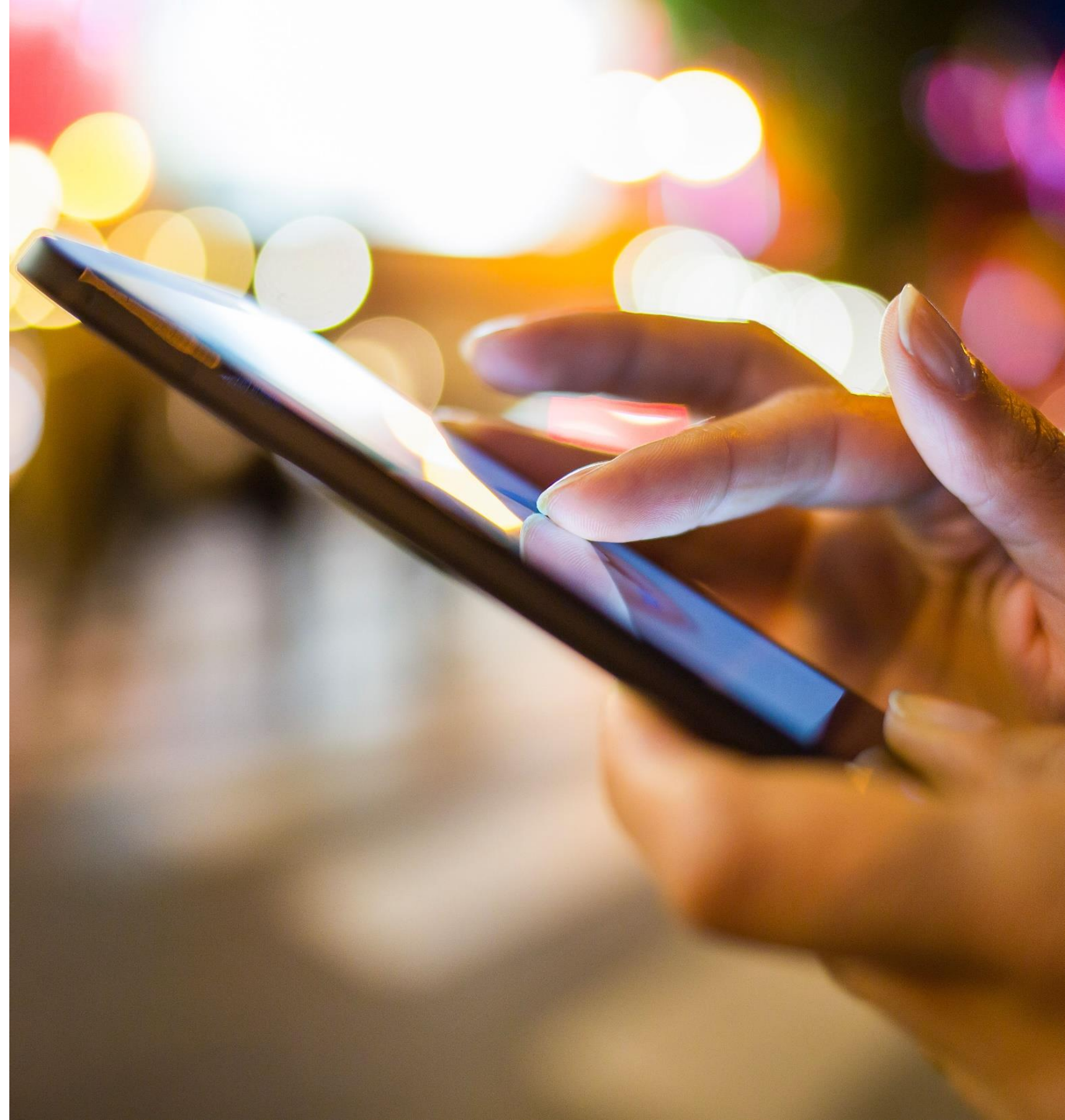


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