

# 03

## Data driven decision making

### **In this chapter, you will learn:**

- » The importance of data in our data-driven world.
- » What data you should be collecting.
- » How data is used to improve the user experience and increase conversions.
- » How knowing your customers is integral to improving their experience with your brand.

### 3.1 Introduction

The strength of the decisions you make depends on the quality and completeness of the information that informs these decisions. This chapter will examine the role of data in delivering meaningful insights into connected, evolving consumers. Data can be used to change and adapt marketing strategies to better meet changing consumer needs. A dynamic view of data is necessary to create an extremely detailed, regularly updated picture of your consumers. This means that you need to be collecting data all the time, at every stage of the marketing process, to ensure that your view of the customer does not become obsolete.

'The evolving consumer' refers to the fact that people are constantly changing. People change on an individual level and are influenced by technology, the macroeconomic climate, financial stability, and a host of other factors that are always in flux.

A current, accurate view of the customer is essential for marketers because consumers expect to be addressed as individuals. You want to deliver targeted communication that reaches the right audience, at the right time, when they are displaying the right intent, to lead them to purchase your product. Data helps make this happen by providing an individual view of each consumer and helping with segmentation and targeting. Data will also show how well your campaigns are performing, enabling you to improve them and make them more effective. In short, data is used to make logical decisions based on real information to create a customer-driven, data-led business. It must be considered not only at the beginning of your engagement with marketing and digital, but throughout.

### 3.2. Key terms and concepts

Term	Definition
Business intelligence/ insights	Data that can help businesses understand the factors influencing their success and how these can be used to benefit them.
Connected customer	Consumers are increasingly connected, using ever-growing numbers of Internet-enabled devices. These offer opportunities for data collection.
Current indicators	Information from the present time that can help businesses to understand their customer and themselves.
Customer intelligence	The process of gathering and analysing information about customers to improve customer relationships and allow for more strategic business decisions.
Data intelligence	The process of gathering and analysing data from all available sources to improve customer relationships and make more strategic business decisions.
Disruption	When a disruptive innovation changes the market and displaces established players.
Dynamic data	Data that is constantly updated and evaluated to provide a dynamic, changing view of the customer.

Future/leading indicators	Information that can help a brand to make decisions about the future.
Goals	Specific actions taken by a user, or specific user behaviour.
Internet of things	The interconnection of everyday objects to the Internet via embedded computing devices, giving them the ability to send and receive data.
Key performance indicators (KPI)	The metrics that are examined to determine the success of a campaign. Lagging indicators Older data that gives information on how a brand performed in the past.
Metric	A quantifiable measure used to track the performance of a campaign. The most important metrics are called KPIs. Net promoter score (NPS) The KPI used to measure customer loyalty.
Segmentation	The process of breaking an overall audience or target market into smaller groups based on specific commonalities for more accurate targeting. Single view of customer Single view of customer is achieved when all customer information is available in a single central location.
SMART objectives	A marketing objective that is specific, measurable, attainable, relevant, and time bound.
Target	The specific value that a marketer wants a metric to achieve.

Table 1.

### 3.3 Understanding data

#### 3.3.1. Consumers, technology and data

To understand data and its role in a business, you need to understand consumers and their relationship to technology. Many people believe that technology changes and consumers adapt in response. Really, consumers are leading the change themselves through the technological choices they make. They decide which technology to embrace, usually favouring whatever facilitates speed and ownership of their own experience. This is particularly true on mobile.

Brands need to meet consumers in the technological spaces they have chosen. The consumer relationship with technology is about accessibility, theirs to brands and products, and brands' to theirs. This has shifted a large deal of power to the consumer.

This connection to technology offers many opportunities for marketers. Every new technology embraced by a consumer offers brands new ways to collect information about them. This leads to more granular segmentation and more targeted marketing messages.

### The Internet of me

Consider the Internet of Things, which is the idea that more and more everyday objects are technologically enabled to send and receive data via the Internet. The information these objects transmit is, for the most part, related to the consumer using the objects rather than about the objects themselves. Consumers use this connected technology to communicate, create content such as social media posts, and consume and share products.

More than an Internet of Things, you can think of this as an Internet of 'Me'. 'Me' is the consumer, and the technology-enabled connection between objects and the consumer allows brands to access reams of data about consumers that they could never have considered a few years ago.

### 3.3.2 What is data?

Put simply, data is all the available information about your business. It includes information about your consumers, your products and their performance, your owned digital properties, and any other information that exists that might affect your business. The mountains of data that your business has access to is good for one thing: it helps you create a strong, data-driven business strategy that lets you connect with consumers and, ultimately, sell more products.

Remember the difference between owned, earned, and paid coverage in the digital sphere? Your owned properties cover your websites, social media profiles, and anything else your brand controls. Read more about this in the [Social media and strategy](#) chapter.

The intention behind the collection and careful use of data is to create more value for your customers. Value can be defined as any means through which the brand delivers on its purpose. Whatever that value is, it needs to be something that customers actually want and that is relevant to them. Data can help you identify what is relevant and useful and what really works.

### Forms of data

There are four main forms of data relevant to brands:

1. **Algorithmic intelligence** – the algorithmic methods used by companies such as Google and Netflix to help drive revenue. In the case of Google, to assess what people want to read, and in the case of Netflix, to assess what they want to watch.
2. **BI: Business intelligence** – the technology-driven process for analysing an organisation's raw data, about profits and performance, and presenting that information to help brands make better informed business decisions.
3. **CI: Customer intelligence** – information derived from customer data, that comes from internal and external sources, to build better customer relationships and make stronger strategic decisions.
4. **SI: Software intelligence** – software tools and techniques used to mine data for useful and meaningful information, the result of which is similar to BI.

By combining all four forms of data, you could say that you are using data intelligence (DI), and this can easily make you the most powerful brand in your field.

### Sources of data

Data can come from any number of sources, particularly thanks to the Internet of Things. You don't need to restrict yourself to website-based analytics. To get a full picture of audience insights, try to gather as wide a variety of information as you can. Some places to look:

- **Online data** – everywhere your audience interacts with you online, such as social media, email, forums and more. Most of these will have their own data-gathering tools. For example, look at Facebook Insights or your email service provider's send logs.
- **Databases** – look at any databases that store relevant customer information, like your contact database, CRM information or loyalty programs. These can often supplement anonymous data with some tangible demographic insights.
- **Software data** – data might also be gathered by certain kinds of software, for example, some web browsers gather information on user habits, crashes and problems. If you produce software, consider adding a data-gathering feature (with the user's permission, of course) that captures usage information that you can use for future updates.
- **App store data** – app store analytics allows companies to monitor and analyse the way customers download, pay for and use their apps. Marketplaces like the Google Play and Apple App stores should provide some useful data here.
- **Offline data** – in-store experience data, customer service logs, in-person surveys, in-store foot traffic, and much more.

You should consider looking for data in unusual places or consuming data in an unconventional way.

Amazon Dash is an excellent example. Amazon Dash is a Wi-Fi-connected service that reorders products with the press of a button. It consists of three components.

1. A scanning device used to inventory consumer goods in a house.
2. The Amazon Dash Button, which can be placed anywhere in a house and programmed to order products of the consumer's choosing.
3. The Amazon Dash Replenishment Service, which allows manufacturers to add a button or auto-detection capability to their devices.



Figure 1. Amazon Dash.

#### NOTE

Take a look at this video on the Internet of Things, how it works, and what we can do with the data: <https://www.youtube.com/watch?v=QSIPNhOiMoE>.

Consumers see this as a brilliant innovation that gets them the product they want, when they want it. They see it as being about convenience, and it is! As an example of incremental innovation, it stands out, and convenience will drive the use of the product. It is also an excellent data collection tool that helps to gather data for granular segmentation. This is good for both the customer and the brand.

### Lagging, current, and leading indicators

Your data-driven, customer-first strategy should be built around three data indicators.

1. **Lagging indicators** are past data such as financial results, sales history and past campaign results. Profits can be seen as a result of your marketing efforts and how you responded to the competition. These indicators are important because they show your past performance, but they are only one part of the whole.
2. **Current indicators** are pieces of information from right now. For example, you can use website analytics to see what customers are doing on your site and which pages they visit. You can use this data to segment around that. The immediate environment is also a current indicator, for example, the #deleteuber hashtag was a huge current indicator for the Uber group about how their customers were reacting to their political actions. Current indicators can encourage you to think about what you can do to be agile in response to them.
3. **Leading or future indicators** help you think about where the company might be headed. Your brand can make a strategic decision about where you're going to be in the future. Look at other brands that are already established in that area, and examine what people search for in that space. What words do they use in their searches? What ideas are they looking for? What kind of innovations are coming out now that may affect the way your brand does business in the future? Is there any economic or environmental data that could affect how your brand performs? Future indicators help you define your strategy for moving the business forward.

## 3.4 Approaching data

### 3.4.1 Enabling dynamic data

Consumers today expect increasingly personalised communication from brands. Personalisation is all about relevance. You can only successfully communicate with and add value to a customer if you understand who they really are. The only way you can do this is through dynamic data.

Many businesses make the mistake of not collecting and storing their data in a single place that can be accessed by everyone. For example, the sales department might have a list of qualified leads, the marketing department might have customer reactions to marketing material, and the CRM department might have access to customer complaints. Multiple data sets within a business pose a risk to customer

communication, especially where they lead to irrelevant or outdated information being shared with customers.

Businesses should aim for a single view of customer (SVOC). This is when businesses have one view of customer data, which is all collected in one place and can be accessed by different departments. However, SVOC on its own is insufficient in today's data-rich environment. A SVOC is important as a starting point for storing clean data, but because it is collected at a single point in time, it doesn't account for customer change.

Because customers are evolving in the way that they use technology and how they consume products, businesses need to evolve their approach to data to keep up. What is relevant to a customer today might be completely different to what was relevant yesterday. For example, customers listed on the database as married may now be divorced, and customers listed with certain political or product preferences may well change these preferences over time. Businesses need to move away from master data focused on a SVOC and toward dynamic data that keeps this evolution in mind.

#### NOTE

Read more about the importance of database hygiene (keeping data fresh) in the [Customer relationship management and Direct marketing: Email and mobile](#) chapters.



Figure 2. Customer experience and data work hand in hand.

As an example, consider a student living away from home, who is provided with a credit card by her father. A SVOC would result in sending marketing material to the father who signed up for the card, when a more dynamic view would take into account who is actually doing the shopping and send the material to her instead.

### 3.4.2 Data and customer strategy

A data-driven view of the customer allows a business to move from organisation-centric to customer-centric thinking.

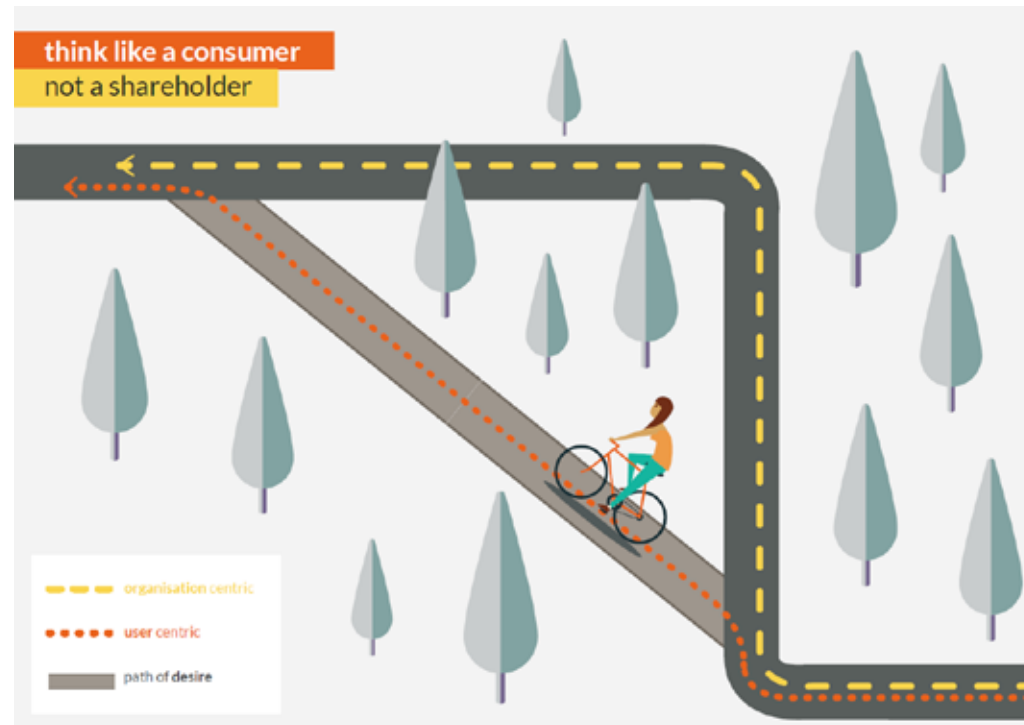


Figure 3. The difference between thinking like a shareholder and thinking like a consumer.

A customer-centric brand will use these five principles in their customer strategy:

- 1. You are not the customer.** No members of staff should presume to know what customers will like or want. No one person's hunches or intuition will be as accurate as a large data set. Use research and data to understand what your customers will like and how they will act accordingly.
- 2. Your brand does not know the customers as well as they know themselves.** The brand should understand their customers, realise that the customers are changing, and be willing and able to use data to track and respond to that change.
- 3. Customers are all different:** broad segmentation is the same as generalisation. With the amount of data available, brands are capable of very granular segmentation so instead of talking about "All women between 18 and 30 who use makeup", they can narrow it down to "Women between 18 and 30 who use makeup, are interested in X and Y, who like to consume Z, and who are friends with A and B."
- 4. Customers are constantly changing.** Dynamic data is essential to ensuring your view of your customer is accurate and relevant.
- 5. Data drives the customer-centric view.** You cannot give your customers what they want unless you know what that is and who they are.

When thinking about different customers using the same type of product, consider makeup brands like MAC and Rimmel. Both brands would target women aged 18–30 years old who wear makeup. However, these brands differ in what their respective customers want from their makeup, what they are willing to pay, what skincare benefits they expect, where they socialise, and what jobs they may have. The more detail you have about your customers, the more you are able to set your brand apart and create marketing messages that speak to individuals.

In a customer-first strategy, dynamic data means creating that never-ending feedback loop we've looked at, of experience out and data in. Everything you do should push out an experience for the customer, and your customer expects that experience to be relevant, personalised, and built for them but in a way that's not too obvious. Larger, established companies may find it difficult to carry out this major shift in thinking to a customer-first approach, which puts new businesses at an advantage.

### 3.4.3 Data and trust

Consumers are increasingly concerned about privacy. To comfortably share with you the data you need, consumers must believe you will treat that data responsibly and respectfully. Any brand collecting data about its consumers, which should be every brand, needs to work on establishing and maintaining this trust.

Trust has three components:

- 1. Security:** You need to make sure that you can protect customer data from being hacked or stolen.
- 2. Privacy:** You need to ensure that your brand is compliant with legal requirements regarding what data it is and is not allowed to be collected and what it is allowed to do with that data. You should have a privacy policy outline that is easily accessible to the consumer.
- 3. Transparency:** Give consumers insight into how their data is being used. Demonstrate how providing access to their data is contributing towards improving their experience.

Once you establish trust with a consumer, that trust can become a bond that leads to a relationship. The more trust you have, the better the relationship will be. However, if you break the trust by overstepping your bounds in personalisation, spamming the customer, or not keeping their data safe, they will go elsewhere.

Different countries will have different legislation around what brands need to do to protect consumer information, such as the European Union Data Protection Directives of 1995, South Africa's POPI (Protection of Personal Information Act) of 2013, or Canada's Personal Information Protection and Electronic Documents Act (PIPEDA). Make sure you are compliant with the laws of the country in which you operate.

## 3.5 Working with data

### 3.5.1 Reporting

The process of becoming a customer-centric organisation does not end with gathering data. You need to report on that data to the people who will act on it, in a format that will actually be consumed. For example, if you give everyone a 27-page financial report filled with spreadsheets and nothing else, very few people will read or try to interpret it.

You need to consider your audience: who is going to receive your data, and what format works best for them? The marketing team would receive different data to the managerial team, who would receive different data to the sales team, and so on. Make the data available, but communicate only what is relevant to that audience to facilitate their path to taking action.

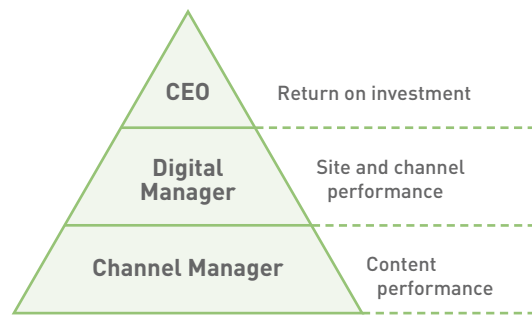


Figure 4. The reporting pyramid. Examples of who needs to see what aspect of website analytics data.

Ideally, and while acting within the bounds of legal requirements, your organisation should place no restrictions on who can or cannot see existing data. Everyone in the company should have access in order to facilitate improvements. Make the data available to customer-facing staff as well as product designers, for example.

Why is this so important? Why does every part of the organisation need access to the data you are giving them? Data takes the emotion out of decisions, moving the organisation toward a customer-centric viewpoint. Managers can no longer say, "I'm experienced in this field, so I know what to expect" because opinion no longer matters. Instead, look at what the data is saying to drive your personalisation strategy and deliver relevant customer experiences.

### 3.5.2 Analysing data

The data feedback loop should never stop after a report. If you want to be agile, you need to consume, interpret, and understand data and turn it into an effect that will result in an immediate reaction.

You can read more about analysing data in the [Data analytics](#) chapter. For now, remember that the goal of analysing your data is to look for patterns such as similarities, trends, deviations, and any other relationship, and thinking about what those mean. This process can help you solve problems both on a small scale, at the level of websites and campaigns, and on a larger business-wide scale that you may not have realised you had.

## 3.6 Becoming a data led organisation

The journey to becoming a data-led organisation is not an easy one, particularly for an already established business. Where would this change happen in how data, and its impact on the customer, is viewed?

A data-driven business needs to involve people who obsess about data and cultivate an organisational culture that puts data and the customer first. The organisational design that enables this data-first approach would look something like this:

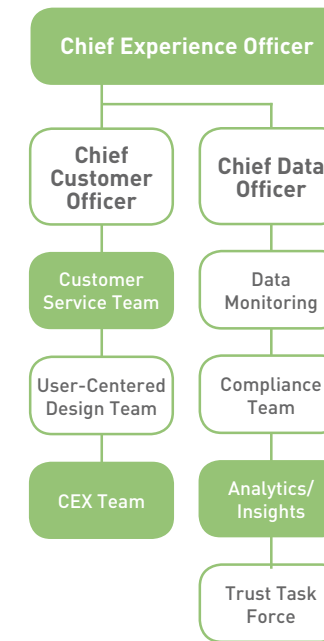


Figure 5. A variation of the organisational design required to combine a focus on data and customer to build a relevant customer experience.

The journey should follow certain steps. These steps don't all have to happen in the same order, but they do tend to focus on three different areas.

#### Internal preparation

First, you will need to internally prepare your organisation for a data-first, customer-driven view. The very first thing your organisation needs to do is understand and **validate the financial and emotional investment** the company must make to deliver this new approach (investment in technology, hardware, people, and change management). Then, you will have to:

- **Gather and analyse collective data** to discover how and where your customers are connected (what channels and with what devices).
- Appoint a **cross-functional team** to champion the Customer Experience strategy. This requires customer officers to evaluate customer experience and data officers who can assess your current back-end architecture and data storage. Remember, you need the right infrastructure to support dynamic data storage and use.



- **Architect the best toolset** that supports your existing platforms to drive and support the changing customer experience. Remember to consider the kind of reporting you'll need to do.
- Consider the three **components of trust** – security, privacy, and transparency – and put people and processes in place to monitor this.

#### Customer focus

Second, your organisation will need to start moving toward actually analysing the customer and making their experience with your brand a better one. This means you need to:

- Identify **granular segments** within your user base.
- Update your **consumer engagement processes** and governance strategy accordingly.
- Shift toward a world where **every customer has a unique view of your product**.
- Start **mapping relevant user journeys** that leverage new channels of access to the consumer.
- Use the collective data to map the journey.
- Consider customer touchpoints and feedback loops.
- Use the data in part of the feedback loop to **map the change** in the customer journey.

#### External evaluation

Finally, you need to keep an eye on what is happening outside your business that could have an impact on it. This means you should:

- **Evaluate competitors** for their use of data influencing their personalisation strategies.
- Identify **emerging technologies** that could drive your incremental/disruptive innovation strategy.

A focus on data will impact and improve every aspect of your organisation, not only your marketing efforts, so start your journey now.

### 3.7 Advantages and challenges

The advantages of a data-driven organisation are enormous. It:

- Drives a customer-centric focus
- Enables innovation in highly competitive markets
- Improves ROI on campaigns and other marketing efforts
- Allows for tactical decisions
- Means no opinions are involved as it is evidence-based decision making.

However, one cannot simply decide to be data-driven and have everything work out immediately. To be data-driven you:

- Have to be data-driven in *everything*, no picking and choosing.
- Have to persuade the entire organisation to adopt this mindset.
- Need to set up an organisational structure that will enable data to flow easily.

- Have to invest in the cycle and you need to invest in data to apply the insights that will help you get more data.
- Need to keep in mind that the huge amount of data available can make finding meaningful patterns tricky.

### 3.8 Measuring success

Success should primarily be measured against your objectives. Gathering an idea of the total economic value of your online efforts can be difficult, but you can do it by examining the following, among others:

#### Site measures

- Audience behaviour statistics (measuring new against returning customers)
- Audience (unique users, page impressions, bounce rates, and visit duration)
- Frequency and engagement
- Conversions across all channels.

#### Sales

- Net sales
- Average order value
- Gross or median order value
- Customer acquisition rate
- Customer retention rate (remember, a retained customer is worth three to five times more than a once-off customer, and it is cheaper to retain existing customers than to acquire new ones)
- Offline sales as a result of online drivers (if someone visits the website or sees an ad online and then walks into the physical store, think about how you can measure this).

#### Services

- Retention
- Acquisitions.

#### Technical performance

Measuring your technical performance is important to ensure that your customer has a good experience on your online properties and will return. You should always have goals for how you want the user to experience the website, considering elements such as:

- Site maintenance, speed and performance
  - Time per page load (average should be 3 seconds)
- Capacity and reach
- IT services support
- SEO.

Remember, your user will give you three to four seconds of engagement time on a landing page and seven seconds on a homepage before they leave if you haven't answered their question, so make sure you know what the user wants and how to give it to them.

### Operations

- Order processing time (an improvement on this based on digital technology is a contribution of online to the business, and it should be counted as a success)
- Fulfilment rates
- Substitution (if a product isn't available, how successful are you at substituting a different one?).

### Marketing

- Campaign results against set objectives
- Customer loyalty NPS.
- Channel optimisation
- Customer surveys.

The idea of benchmarking can cause some confusion for brands wanting to measure their success. While industry benchmarks for things like marketing campaigns can be useful for seeing your standing in your industry, you should really be benchmarking against your own previous performance to ensure that you are always improving as a brand.

On the other hand, harder, more technical aspects of your digital performance should absolutely be measured against universal standards. Page load times have a measurable effect on SEO and customer engagement, so although decreasing your time from twelve to eight seconds is a good effort, you would still be well above the expected three seconds, and this will impact your site's overall performance in multiple areas (Hobo, 2017).

#### NOTE

Uncertain how to measure customer loyalty? Take a look at this article on the net promoter score (NPS), which is the KPI used to measure this: [blog.emolytics.com/kpi/net-promoter-score-customer-loyalty](http://blog.emolytics.com/kpi/net-promoter-score-customer-loyalty).



Figure 6. Longer load times increase page abandonment.

The time you take to respond to consumers or to make a sale should be measured against universal benchmarks for similar reasons. That is, consumers have come to expect a certain standard in some areas, and anything not meeting this standard will result in a negative customer experience.

Each chapter in this book will give you an indication of the kind of metrics you should look at to determine success in particular areas.

## 3.9 Tools of the trade

Many tools exist to help you make the most of your data!

Customer insight tools can help you find out more about your customers and what they think of you. These are tools that help you with online reputation management (ORM). For example:

- Google Alerts: [www.google.com/alerts](http://www.google.com/alerts)
- Hootsuite: [hootsuite.com](http://hootsuite.com)
- BrandsEye: [www.brandseye.com](http://www.brandseye.com)

Data gathering tools:

- Google Analytics: [analytics.google.com/analytics/web](http://analytics.google.com/analytics/web)
- Quantum Leap Buzz: [www.quantumleapbuzz.com](http://www.quantumleapbuzz.com)
- Wolfram Alpha: [www.wolframalpha.com](http://www.wolframalpha.com)

Data visualisation tools:

- ClickView: [www.clickview.com](http://www.clickview.com)
- Plotly: [plot.ly](http://plot.ly)
- Tableau: [public.tableau.com/s](http://public.tableau.com/s)
- Open Refine: [openrefine.org](http://openrefine.org)
- Fusion Tables: [support.google.com/fusiontables/answer/2571232](http://support.google.com/fusiontables/answer/2571232)

## 3.10 Case study: Royal Canin Russia

### 3.10.1 One-line summary

Royal Canin used existing data to create personalised email coupons and local offers tailored to individual subscribers, tapping into the love pet owners have for their unique animals.

### 3.10.2 The challenge

Royal Canin's customer database was very outdated, and most people still bought their products in stores rather than online, a more efficient channel. Loyalty programmes for pets were usually seen as retailer initiatives rather than giving the brand recognition for these.

They wanted to create a loyalty programme that would encourage an image of Royal Canin as an expert in the field of pet food, across different breeds and it wanted to establish a relationship with consumers that would cause them to buy their pet food directly from the brand rather than at stores.



### 3.10.3 The solution

Royal Canin targeted dog and cat owners in the top six Russian cities, regardless of breed. They ran an algorithmic analysis of their CRM platform so that they could segment their audience and send offers according to:

- Type of pet
- Size of pet
- Upcoming 'events' such as a birthday or growth stage
- Medical records and any other data they had on the pet owner.

They could then send personalised email coupons to owners with deadlines for redemption. The unique link in the coupon would send the owner to a page already populated with a list of products chosen specifically for their pet, where they could place an order without leaving the platform. The online orders also facilitated brand communication by connecting pet owners to special events and programmes in various cities.

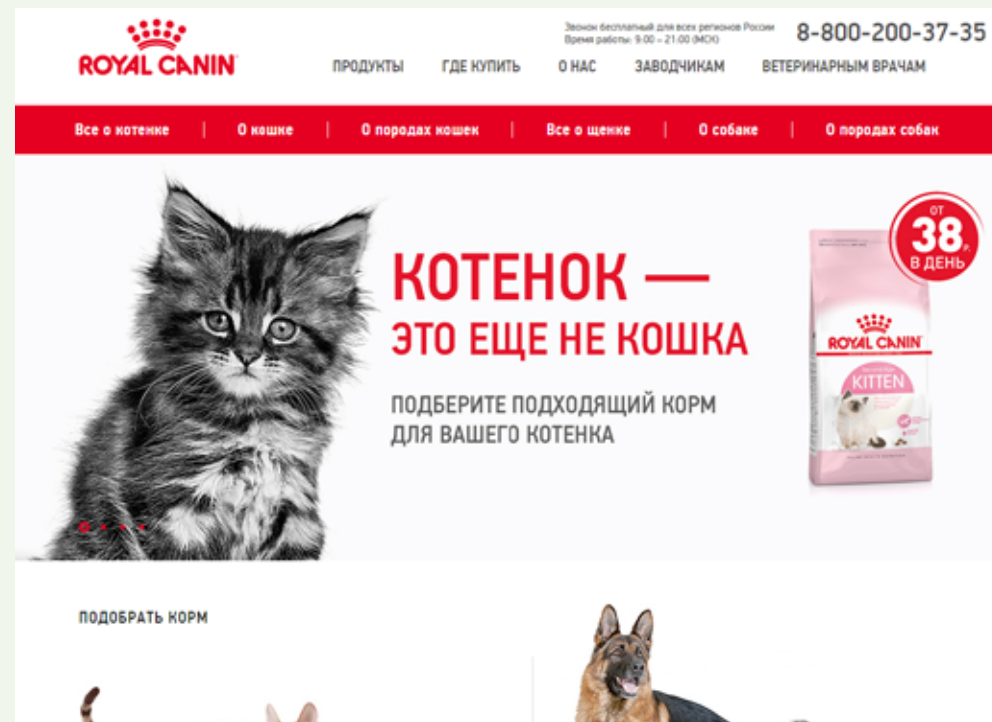


Figure 7. Royal Canin Russia's homepage.

Customers could choose whether they wanted the food delivered to their home or whether they wanted to pick up their merchandise at a store near them.

Data from the mailed coupons was loaded into the CRM database, including whether the recipient used the coupons they were sent. The regular database updates helped the team assess a customer's level of involvement with the platform.

It also affected the everyday aspects of the business. Based on coupon redemption and other information gleaned from the campaign, the brand could adjust the availability of items in online

and offline retail platforms according to demand. It also gave them the data needed to understand how much inventory they needed for different products based on their popularity.

### 3.10.4 The results

The campaign was a resounding success. Because of the data-focused approach, Royal Canin:

- Reduced logistics costs
- Minimised waiting time for orders
- Improved the customer experience
- Showed the customer that the order was implemented by the brand and not a retail store
- Created an adaptive platform for mobile orders after finding that 80% of recipients opened the initial offer on mobile.

The campaign also worked very well for consumers.

- Push SMS messages sent using geolocation helped monitor special offers at retail stores. Subscribers in the area could then receive unique promotional codes to redeem at those stores
- 65% of respondents opened the campaign messages
- 74% of those who opened the message went to the online ordering platform
- 46% of orders implemented coupons
- 75% of customers participating in the programme said they used Royal Canin food for their pets.

(Digital Training Academy, 2017)

You can view the video for this campaign here:

[www.digitaltrainingacademy.com/casestudies/2017/02/mobile\\_case\\_study\\_royal\\_canin\\_runs\\_offers\\_factory\\_for\\_pets\\_in\\_russia.php](http://www.digitaltrainingacademy.com/casestudies/2017/02/mobile_case_study_royal_canin_runs_offers_factory_for_pets_in_russia.php)

## 3.11 The bigger picture

### Data driven innovation

The view of data and its place in a business is evolving, but it is still lagging behind where it needs to be. Data tends to be focused on customer intelligence (CI), which includes customer profiling, or business intelligence (BI), which includes transactional behaviour. Businesses use these to decide what to do next. Some businesses are forward thinking and combine the two so that they have two different indicators of what the consumer might need.

CI and BI are the bare minimum of what businesses should be doing with data. Consider the notorious example of Target, a U.S. retailer that used data about customer shopping habits to send relevant marketing material to their customer. One father of a teenage girl complained to the store about sending his daughter coupons aimed at pregnant women. A short while later he apologised after discovering that his daughter was indeed pregnant (Business Insider, 2012).

That Target knew the teenage girl was pregnant is impressive. If they had combined CI and BI, they would have realised that they were about to market pregnancy-related products to a teenager. They could have avoided a great deal of embarrassment!

Both BI and CI are lagging indicators, data that the brand has collected about the past behaviour of consumers and the past performance of products. Many businesses only look at data with this traditional view, but it can tell us much more. A business that focuses on how to collect and analyse data can predict future customer behaviour, work on forward-path product development and improve personalisation.

Technology-enabled innovation is all about the customer experience. If the customer enjoys their experience with your brand, no matter what the product, they will keep using it. If your product is connected to the Internet, you can gather customer data that will further inform your product development. This creates a feedback loop in which you gather data, improve the customer experience, and gather more data, and so on.

Withings, a brand connected to Nokia, has created a weight scale that connects to a database, tracks your weight on a graph, and feeds it back to you in an app. The app can also connect to Withings' other lifestyle devices such as smartwatches and blood pressure monitors. This gives the user a lot of useful data, but it's also a great way for the company to collect data about its customers.

Any object that is both connected and information-intensive has the capability to do things in new and different ways, in other words, to disrupt.

Technology-enabled innovation should focus on the customer experience and should be data-led. It comes in two forms:

- **Incremental innovation** – doing things better in your everyday business practice to improve your customer's experience.
- **Disruptive innovation** – positioning your business for future customers.

Both are equally important. Incremental innovation is sometimes downplayed, but changing one small thing might have a big impact on how your customers perceive your brand. People often associate 'innovation' in a business context with innovation labs, or assume that it belongs to an innovation team and is someone else's problem. However, when you have a data-driven customer experience, because you have such a thorough understanding of where your customer is and who they are, a tiny incremental innovation plan can fundamentally change your customer experience.

Disruptive innovation is about positioning your business for the future customer. It refers to big changes that will change how customers interact with your business (and possibly your whole industry), and it generally ends up displacing whatever technology preceded it. For example, cell phones have almost replaced landline phones. For innovation to be relevant to your consumer, you need the right data.

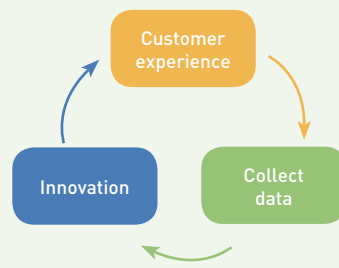


Figure 8. The data feedback loop.

An obvious example of a brand that did this, and in turn completely disrupted an industry, is Uber. They saw people struggling to find taxis and a lot of people who owned cars not driving them (Belarbi, n.d.). They then thought about how to add technology to bring the two together, took a map (information), added a layer of connection (person to person), and invented an app that has almost toppled traditional taxi brands. Uber used already existing GPS technology to solve a problem in a way no one had considered before.

Uber also uses incremental innovation by regularly rolling out updates to its app and services that will positively affect customer experience. For example, Uber noticed that many potential customers in their South African locations did not have access to a credit card, so they piloted experiments with cash payments in that country.

Think about how Uber gathers the data it needs to make these incremental improvements. They receive a huge amount of data every time someone uses their app. Updates of where people are going, their most frequently visited locations, times of day during which travel takes place, and more. This kind of data-first thinking allows them to provide more value to customers, track their improvements and thus establish a powerful data feedback loop.

### 3.12 Chapter summary

The more data you collect, the more relevant you can make your customer experience. Relevance leads to a better customer experience, which leads to more opportunities to collect data. A customer-focused, data-driven organisation needs to embrace this cycle, which enables both incremental and disruptive innovation.

Businesses need to embrace dynamic data that enables them to keep a clear view of their evolving customer. This data strategy should be built around lagging, current, and leading or future indicators, each of which can give you a different piece of the data puzzle. If this happens, the business will have a clear view of past and current performance as well as where they can go in the future.

### 3.13 Case study questions

1. What role did data play in the planning and execution of the Royal Canin campaign?
2. Why was it so important for Royal Canin to continuously monitor the campaign results and update their CRM database?
3. What beneficial effects did the data generated by the Royal Canin campaign have on the running of the business overall?

### 3.14 Chapter questions

1. Why should a business try to be data-driven?
2. What should be done with data once it has been collected?
3. What are some of the most important sources of data?
4. What are some up-and-coming data collection tools/sources that you foresee being useful in the near future?

### 3.15 Further reading

Personalisation is important for great customer experiences, but read about how this might be a problem for small businesses here: [adage.com/article/digitalnext/personalization-a-problem-brands/305554](http://adage.com/article/digitalnext/personalization-a-problem-brands/305554)

Check out the Kissmetrics blog for articles about analytics and testing: [blog.kissmetrics.com](http://blog.kissmetrics.com)

The Analytics Vidhya blog has some more complex data information: [www.analyticsvidhya.com/blog](http://www.analyticsvidhya.com/blog)

Take a look at the Freakonomics blog: [freakonomics.com](http://freakonomics.com)

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### 3.17 Figure acknowledgments

**Figure 1.** Wnep, 2015. <http://wnep.com/2015/03/31/amazons-dash-button-lets-you-press-button-to-order-your-favorite-products>

**Figure 2.** Unknown, n.d.

**Figure 3.** Own image

**Figure 4.** Own image

**Figure 5.** Own image

**Figure 6.** Hobo, 2017. <http://www.hobo-web.co.uk/your-website-design-should-load-in-4-seconds>

**Figure 7.** Screenshot, RoyalCanin Russia 2016

**Figure 8.** Own image.