DATA³

HOW TO TURN YOUR DATA INTO A MONEY MAKER

A GUIDE ON BUILDING STRONG USE CASES, EXTRACTING AND USING YOUR DATA

You see zeros and ones, we see a goldmine. Data is hugely powerful for businesses in Marketing, Sales, Procurement, you name it.

At Data[3], we help our clients bring data together from lots of sources. This can be really complex and involve external sources too, depending on your use cases. In this handy guide, we will share with you data tips and know-hows on:

1. Building strong use cases with your data
2. Extracting your data
3. Analysing your data

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PART ONE: BUILDING A STRONG USE CASE

Start a data project without strong objectives and you'll be in trouble. Luckily for you, your friendly neighbourhood data hub is here to help. In our first guide, we'll show you how to build kick-ass use cases and win at the data game.

STEP 1: GET SOME PERSPECTIVE

First things first—forget the data.

Start very basic. What is it that you'd like to know? What are the questions you want answered? The ones you might be asked by your stakeholders, distributors and customers. These could include:

- How can we grow?
- How can we cut costs?
- How can we improve customer service?
- How can we become more efficient?

And what are you trying to achieve? If you're exploring your customer data, for example, you'll know if your primary goal is to:

- find new clients
- grow existing clients
- retain current clients

So, focus on this goal first.

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STEP 2: TRACK YOUR PERFORMANCE

There's nothing worse than knowing you've done a great job without being able to prove it. Think about how you can measure your success. Consider your business priorities and your key performance indicators.

These could be:

- Revenue-focused
- Sales-based
- Cost-related
- Customer-based
- Satisfaction-based

Every business model's different, so consider the levers you can pull to make a demonstrable impact on business success. Think about where your revenue comes from and how it can increase or decrease. Think about your costs and consider whether the bulk of costs are spent on people, technology or property.

Focus on the performance trackers that matter, so that the use case will have a real-world impact on your business, and not just look pretty.

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STEP 3: THINK ABOUT YOUR USERS

Who will use your data tools? You need to design solutions that work for them.

As an example, a tool that's designed for the Board and C-Suite will need to be very different to a tool that's designed for a hands-on operations manager.

Think about how the users will use the tool:

- What questions will they want answered?
- Will they want to explore the data or just see the end results?
- Will they access it every day or just now and again?
- How often will they want to see updates?
- How far back will they want to see historical trends?

The answers to these questions will impact the design of the data tool so it's important to understand the expectations and requirements of your business users.

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STEP 4: TELL A STORY WITH YOUR DATA

People love a good old story. It provides context, insight, interpretation — all the things that make data meaningful and analytics more relevant and interesting. So when you come to building your use cases, develop hypotheses or stories that you can test with the data.
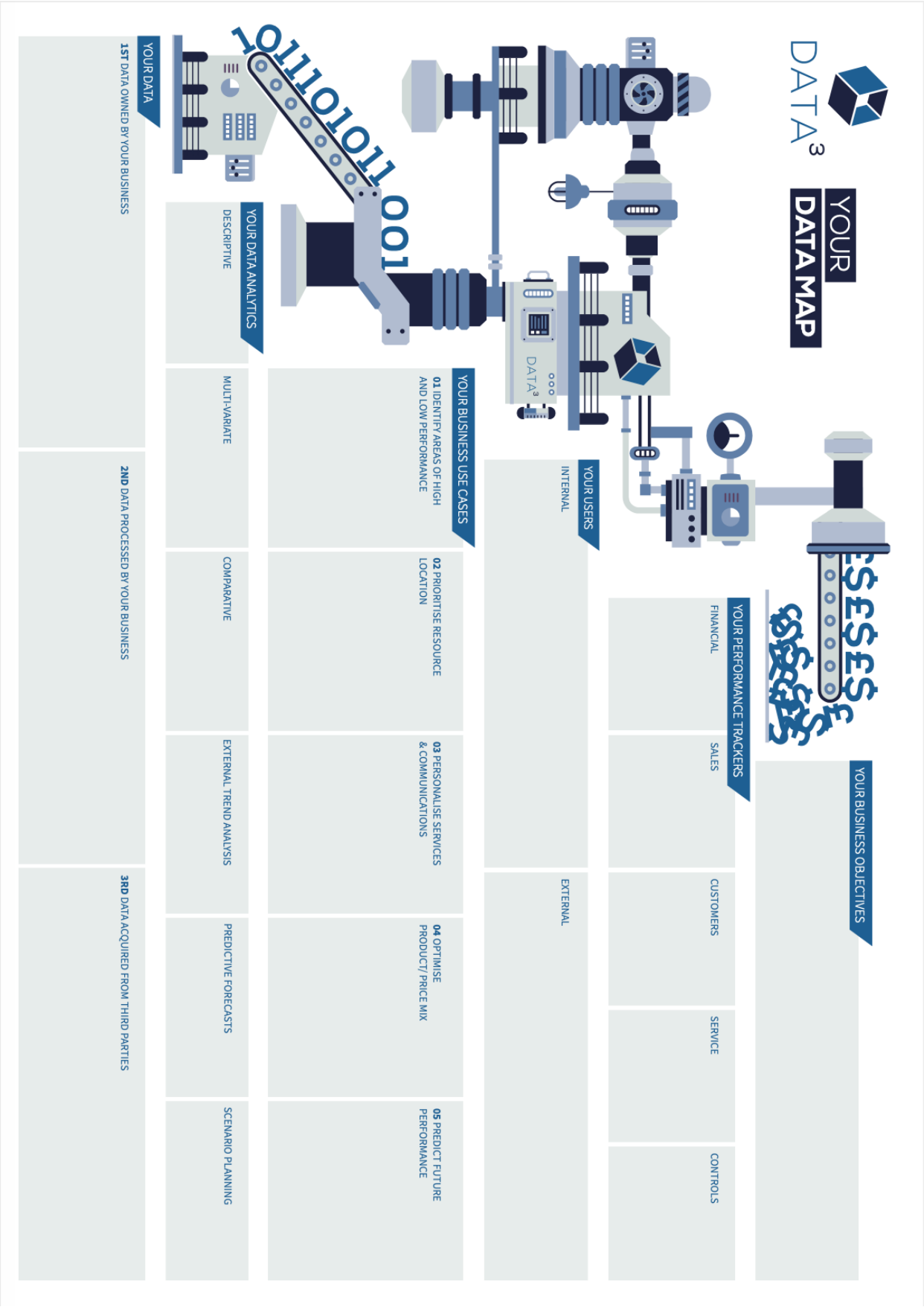
Think about your users, and the trends they'll want to see. Then start building your story:

- Imagine if we could identify areas of underperformance or untapped business opportunities
- Imagine if we could identify areas for potential revenue increase
- Imagine if we could predict future business performance
- Imagine if we could create a new data tool for your distributors to use…
- *to compare their sales/purchases to other distributors*
- *to show sales/purchases by customer demographic/location/type*
- *to predict future sales/purchases*

It's crucial to understand what your business users will be interested in so you design a tool that's useful and valued by them.

Finally, to bring this all together and help you spot opportunities for data quickly, get all of the 4 steps to data use-case bliss down on one page using the Data[3] Data Map on the next page and plan your use cases like a pro.

DATA[3]

YOUR DATA MAP

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YOUR DATA

1ST DATA OWNED BY YOUR BUSINESS

2ND DATA PROCESSED BY YOUR BUSINESS

3RD DATA ACQUIRED FROM THIRD PARTIES

YOUR DATA ANALYTICS

DESCRIPTIVE

MULTI-VARIATE

COMPARATIVE

EXTERNAL TREND ANALYSIS

PREDICTIVE FORECASTS

SCENARIO PLANNING

YOUR BUSINESS USE CASES

01 IDENTIFY AREAS OF HIGH AND LOW PERFORMANCE

02 PRIORITISE RESOURCE LOCATION

03 PERSONALISE SERVICES & COMMUNICATIONS

04 OPTIMISE PRODUCT/ PRICE MIX

05 PREDICT FUTURE PERFORMANCE

YOUR USERS

INTERNAL

EXTERNAL

YOUR PERFORMANCE TRACKERS

FINANCIAL

SALES

CUSTOMERS

SERVICE

CONTROLS

YOUR BUSINESS OBJECTIVES

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PART TWO: EXTRACTING YOUR DATA

Before any writer tells a great story, they'll research a topic inside and out before typing their first word - it's the same with expert data visualisers. With purpose and care, they'll extract the right data, in the right way, to make sure they can tell a great story with it.

Here's 3 steps to do it right:

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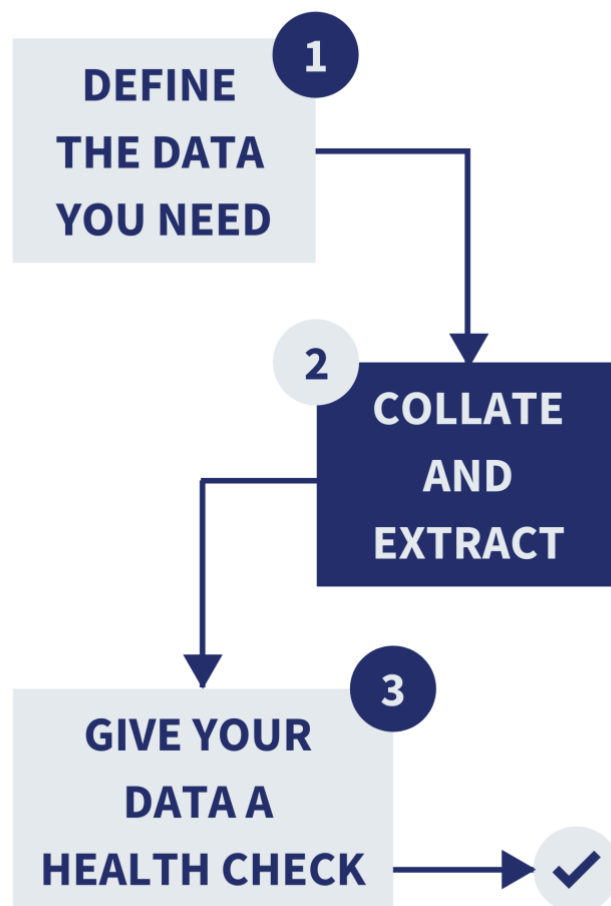
STEP 1: DEFINE THE DATA YOU NEED

Don't extract every field from every database from every business area… or you'll drown in data. It is important to only extract the fields you require and the frequency of data you need.

You need the Goldilocks amount of data — not too little. Otherwise, you won't be able to answer the business questions. But not too much, otherwise your dashboard will be slow and cumbersome. You need just the right amount of data. You can get this right by only extracting the data you need to answer your specific business use cases.
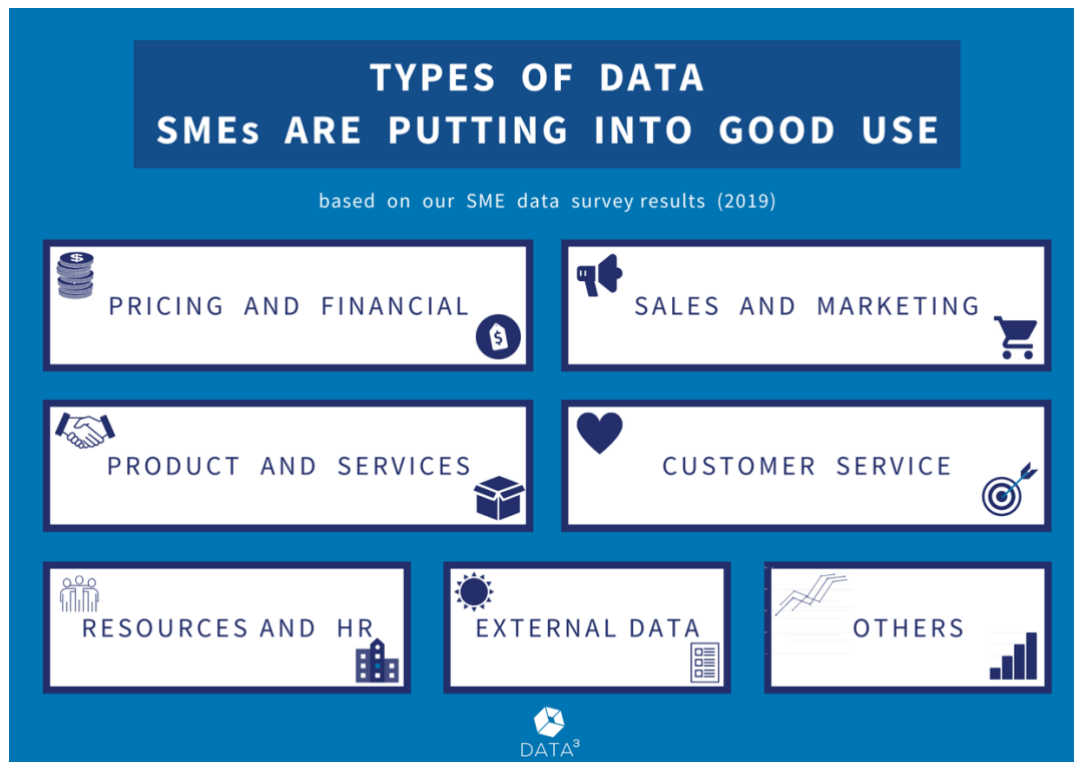
Take a look at the types of data SMEs were putting into good use acccording to our 2019 SME survey.

Remember you can also source data from outside of your business including:

- free publicly available data
- data from your business partners, distributors or customers
- buying in third-party data

STEP 2: COLLATE AND EXTRACT

This is a tricky thing to get right. You could be extracting data from numerous internal and external sources of all different types, sizes and complexity. You could have different levels of data quality in terms of completeness of data or consistency of data formats.

Generally, the more sources you're looking to combine, the more effort and error tend to occur. So the trick is, again, to only focus on fulfilling the business requirements. Try to be lean with the data you extract. The more you prepare and spend time on step 1, the easier the extraction will be.

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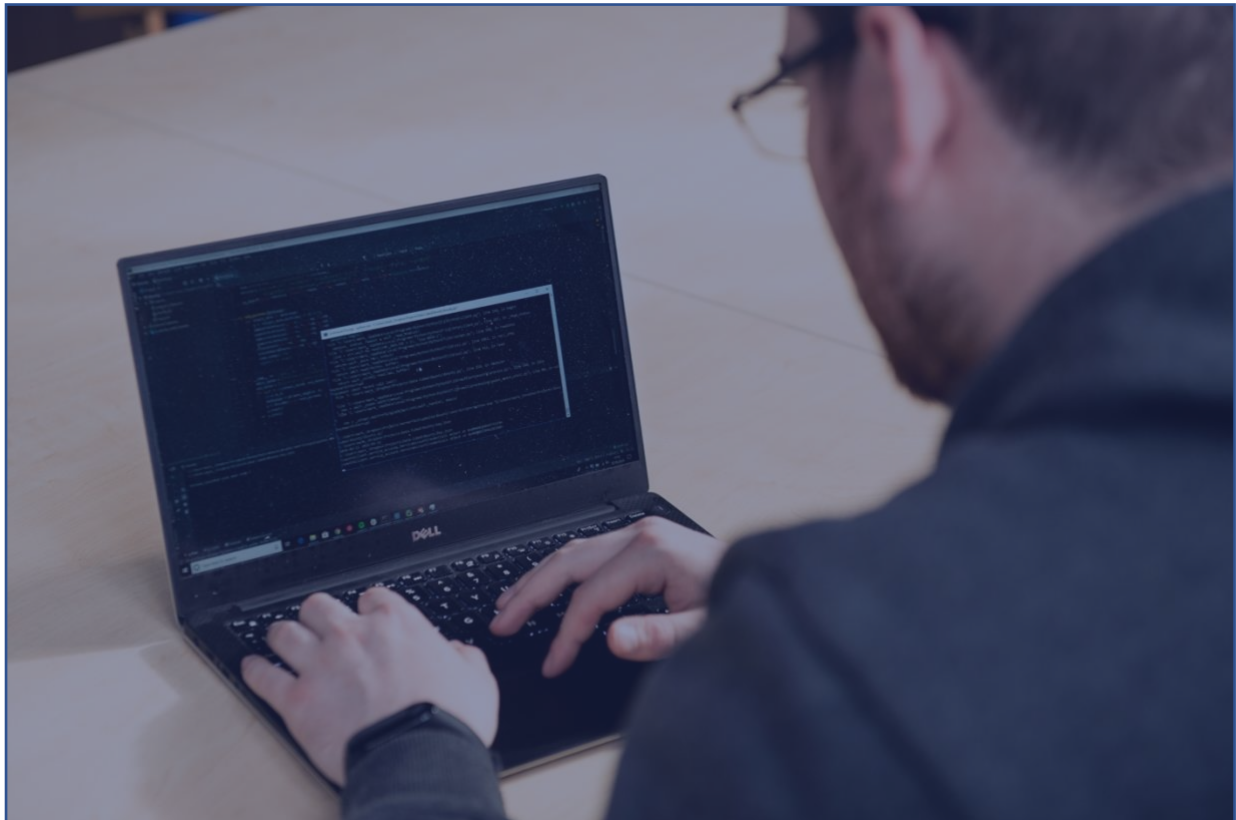
## STEP 3: GIVE YOUR DATA A HEALTH CHECK

Without a doubt, once your data sets are together, you'll find errors. So what you'll need is a repeatable process to cleanse, enrich and combine data sources together. When we work with client data, we give it a full health-check, to make sure we've received what we thought we would. We'll inspect fields, formats and completeness. We'll then merge data sources, reformat fields and match data so it's accurate and relevant.

We work in a structured way, taking our clients' data through six assessments. We then calculate the health of their data and provide a KPI to show areas in need of focus.

1. Data Completeness: We check data is complete and there are minimal missing cells
2. Data Uniqueness: We make sure there aren't duplicates
3. Data Timeliness: We check data is not out-of-date
4. Data Validity: We confirm data is in the correct format and within the expected range
5. Data Accuracy: We check data is representative of reality
6. Data Consistency: We ensure fields are the same in different databases

Worried you have data all over the place?

We're used to working with data from multiple databases and applications. We wrangle with all file types and specialise in integrating data sources so insight can be drawn from a single place. Here's a list of what we commonly work with:
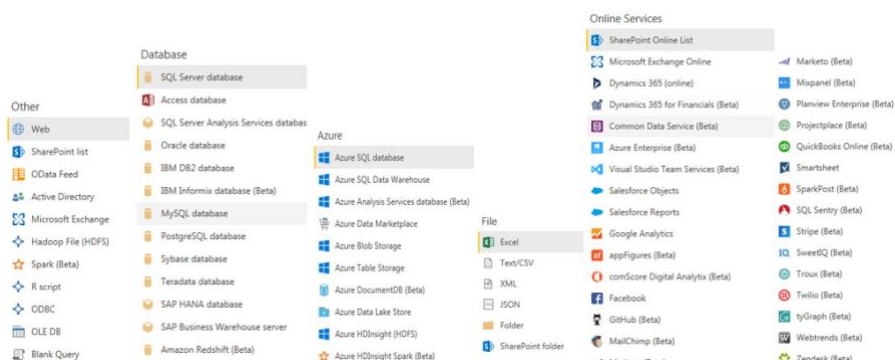
PART THREE: ANALYSING YOUR DATA

Now that you've set strong business objectives and wrangled with your data to make sure it's accurate and relevant, here comes the super important part—the analysis of your data. To do it right, you'll need to know the different ways you can slice and dice your data. Whichever method you choose, think back to your business use case and what you're hoping to get from your data.

In this part of the guide, we will talk you through:

- Descriptive analytics
- Predictive analytics
- Prescriptive analytics

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DESCRIPTIVE ANALYTICS – INSIGHT INTO THE PAST

In many ways the most basic form of analysis, descriptive analytics looks at how your business has performed in the past based on simple variables. For example, how many customers bought a certain type of product. Or which customers bought the least or the greatest number of products. It's basic stuff, but it can still be powerful.

To get the most from descriptive analytics, you can mix one variable with another to tell a story. For example, if your business use case is to generate 100 leads in Q1, look at two things. Look at the number of leads you generated after your recent Christmas campaign. Then look at how many leads you generated after you launched a new series of banner ads. By comparing the two variables, your data begins to paint a picture of what's working and what's not.
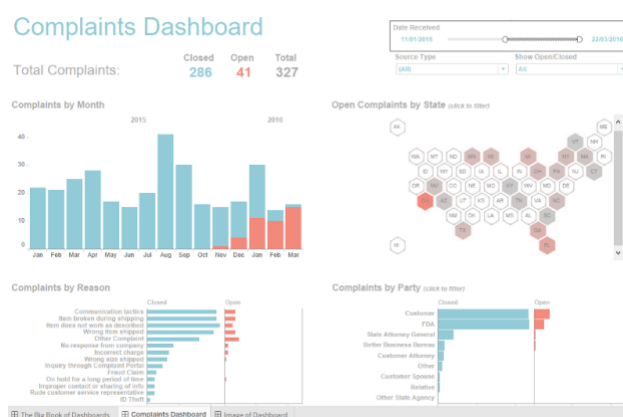
Example of descriptive analytics. **Source: Chapter 20— Big Book of Dashboards**

In the example above you can see a dashboard that shows complaints logged in the past. This is broken down by those that have been resolved and those that are still open.

Filters can be applied to narrow down complaints by month, state or party. You can also see a count of the reasons for the complaints, again broken down by resolved and open. Using this dashboard, a user can learn from past behaviours and understand how they might influence future outcomes. What it won't do however is actually predict future complaints.

PREDICTIVE ANALYTICS – UNDERSTANDING THE FUTURE

The buzz word that pops up again and again. Predictive analytics is using past data to predict what will happen in the future. By picking out patterns where history repeats itself, you're able to forecast events and plan accordingly. You can show recurrence in a number of ways: markers, overlays, time frames, layers, aggregates, etc. This saves you from plotting each individual point and helps people see patterns quicker.

Predictive analytics is often tied up with AI and machine learning because you can feed historical data into a mathematical model that finds patterns and trends in your old data. This same model can then be applied to your current data to automatically predict what will happen next.

Whilst it all seems flashy—predictive analytics is nothing new. Our founder, Hels, started her career at the Met Office, home of predictive analytics in the form of everyday weather forecasts. Back in the day, Hels and the team were using weather data to predict grocery sales at the UK's top supermarkets. This was way before predictive analytics and AI were buzzwords.


Example of predictive analytics. **Source: Tableau Public**

The line chart above shows sales over four years, along with a forecast for future sales into the next year. Using both estimated and actual sales figures, the chart also includes a trend line which predicts future average values.

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PRESCRIPTIVE ANALYTICS – ADVISE ON POSSIBLE OUTCOMES

If predictive analytics asks the question, "what's most likely to happen based on my current data?", prescriptive analytics asks, "what can I do to change that outcome?".

Prescriptive analytics is arguably one of the more complicated methods of analysis. Often, it will rely on AI and machine learning to access the impact of multiple future decisions and then provide a scenario for the best outcome. Done well, and prescriptive analytics can be used by analysts to foresee if a change will help them reduce risks, improve operations, and/or increase revenue. In short, it can revolutionise business practice.
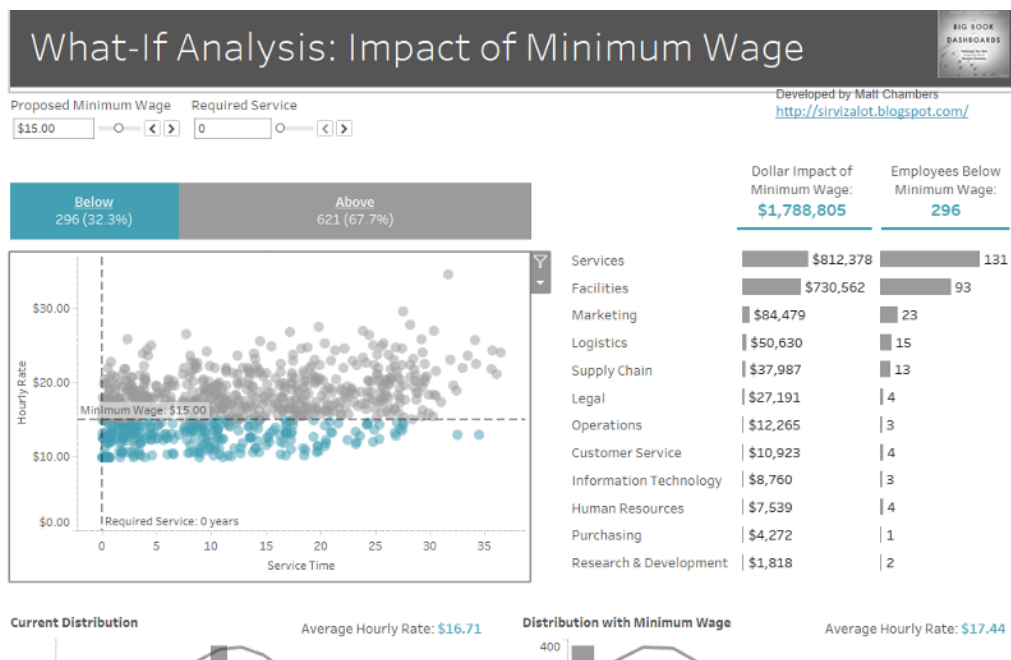
Example of prescriptive analytics: What would happen if we changed the minimum wage? ***Source: Chapter 4—Big Book of Dashboards***

In the example above, you can see how many employees in different sectors would fall below the minimum wage if it rose. It also shows in monetary terms how much it would cost each sector if the minimum wage was increased. There is an option to play with the top left filter to see the effect that a rising minimum wage and years of service has on the number of those falling below minimum wage.

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