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A five-step guide to becoming a data-driven retailer

Contents:

While "data-driven" appears to be one of the most commonly used terms in business today - only 31% of businesses have actually restructured their operational process.

This simple five-step overview will guide you through the steps needed to data-drive your business. We'll talk you through:

- An overview of the steps, from data cleaning through to structuring, automating, and analysing
- Suggestions on useful tools you can use to help set up and maintain each step of the process
- How to set up and grow an ideal data-team to help own analysis in your business

An article version of this guide was initially published on Retail Sector.
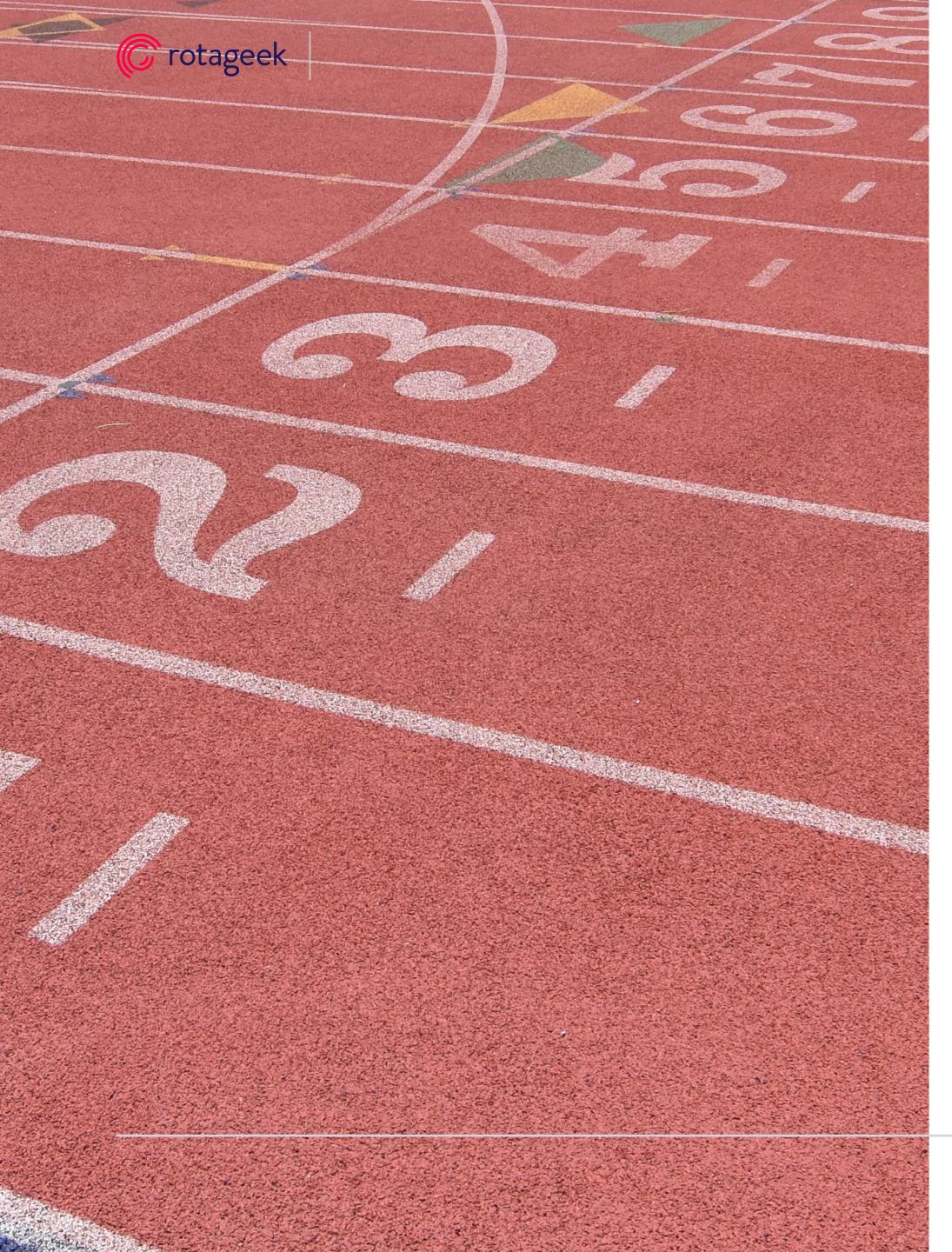
What's the real benefit of data-driven operations?

Retailers are discovering innovative ways of using the data they already possess to transform their customer experiences.

Data-driven businesses are 23 times more likely to outperform their competitors in acquiring new customers and six times more likely to retain those customers, with a 19 times greater likelihood of achieving above-average profitability as a result.

Data-powered tech can significantly improve in-store experiences through ensuring that supply of any kind (product stock, customer care levels, etc) are sufficient for customer demand.

In a study we conducted at Rotageek, we found that 41% of retailers often wrongly predict the number of staff needed in-store. That is a forecasting and demand-matching problem that data-driven tech can solve.

Step 1 - Prioritise your data

How?

If you are like most retailers, you are already collecting more data than you can use. Initially, you'll need to prioritise the data streams that are most important for your business. Where datasets already exist, you will need to identify any quality or access challenges that prevent these datasets from being useful.

Where data are not currently being collected, you'll need to figure out how to begin collecting that data, how to store it, and how to ensure it remains high-quality.

Identifying which data are most important to satisfy business demands will focus data efforts, reduce the amount of time it takes to deliver tangible benefits, and prevent resources from being spent on valueless data.

The team you'll need

- Decision makers who want to use data to inform decisions
- Operations managers (people who understand what data is being collected already)
- Data engineers (to figure out data storage)
- Data scientists (to figure out how to use data to answer the questions posed by decision makers and ensure data is high quality)

Tools

- Relational databases
- Data visualisation tools

Step 2 - Clean your data

How?

Data quality is viewed as a key challenge by 50% of companies. In order to start creating valuable analytics, it is essential for you to clean up existing data and ensure it is only stored in high-quality form.

High-quality data is accurate, complete, timely, valid and consistent. Any breakdowns in data quality can greatly reduce the value derived from reporting, analytics, or data science.

To ensure that your data remains high-quality, each collected dataset should have an identified maintainer and should only be collected if it is going to be actively used. Otherwise, it is all too easy for quality issues to occur without anyone noticing, rendering years of data unusable for meaningful analysis.

The team you'll need

- Data Scientists
- Software Engineers
- Data Engineers

Tools

- Exploratory data analysis tools (e.g. Python pandas)
- Object data models
- Custom-built data processing and verification pipelines

Step 3 - Build automated reports and analytics

How?

Once you ensure that the data are high-quality, the next challenge is to use that data to make decisions. When this happens, data become a key asset that underpins the objectives and strategies of your organisation.

By the time you have reached this stage, the data storage processes and frameworks are already established. When you initially prioritised data in Step 1, you decided that some datasets were important to drive decisions about your business.
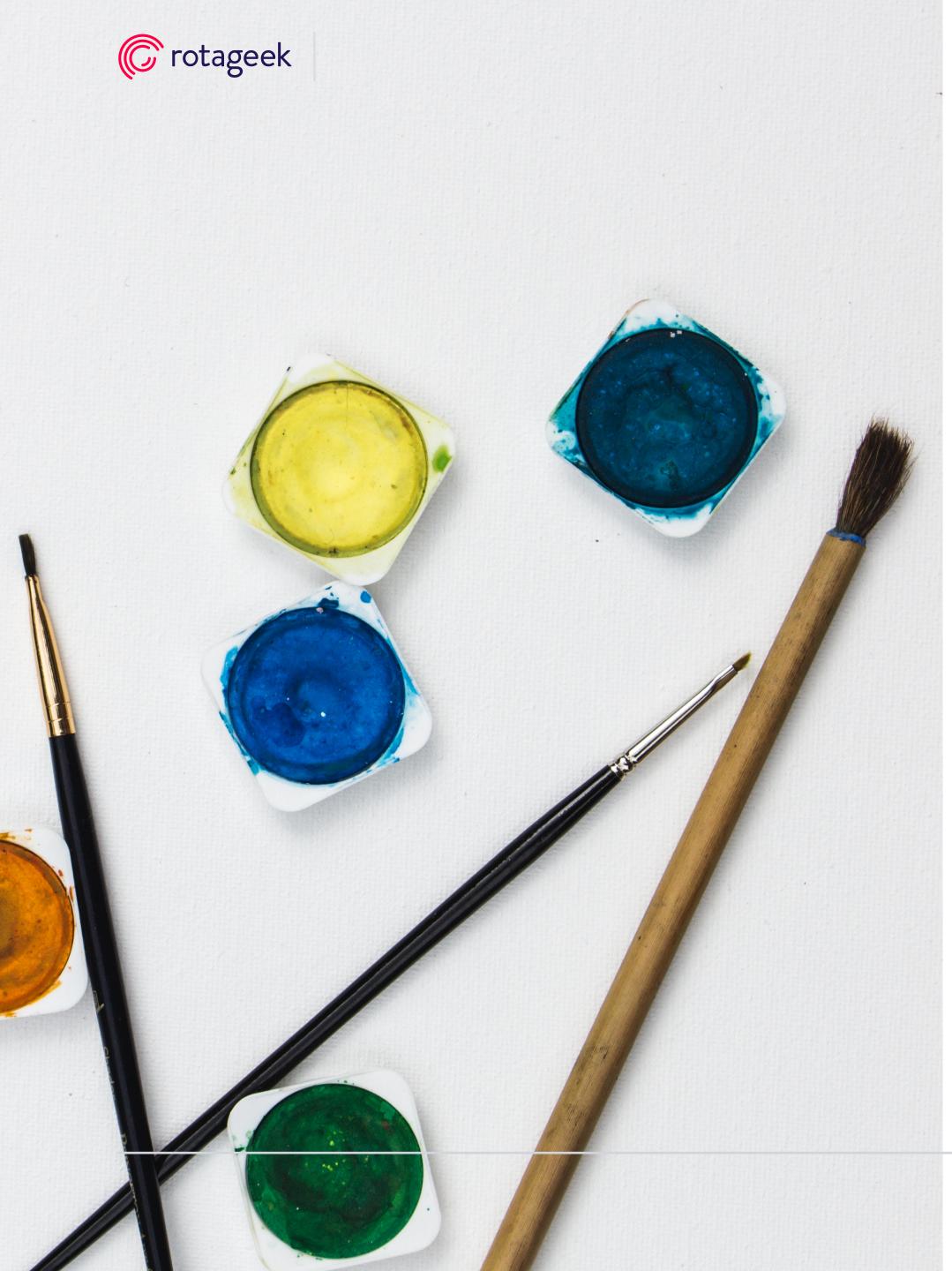
At this point, it is time to automate the reporting process, so that decision-makers can receive real-time insights from these datasets to influence their decisions.

This will enable your company to effectively grow, create, optimise, and protect value across an array of operational areas.

The team you'll need

- Data Scientists
- Software Engineers

Tools

- OTS Reporting software (e.g. Kibana, Tableau)
- Custom-built reports

Step 4 - Leave space for creative analytics

How?

By this stage, you have answered some of your highest priority questions using data. But your data use needs to keep evolving.

You need to continue to search for new data patterns in the datasets you currently collect and identify additional ways that these data can inform decision-making.

This requires stepping back from usual analysis once in a while, thinking more holistically about the data you have, and maintaining a creative approach to analysis.

These exploratory projects should be hypothesis-driven, which will ensure that the focus of each project is small and that it will quickly deliver value without using many resources.

The team you'll need

- Data Scientists
- Decision Makers

Tools

- Data analysis tools (R, Python)
- Statistical inference and machine learning packages (e.g. sklearn, stan)

Step 5 - Repeat!

How?

The most important step of all is to continue to iterate.

By focusing initial efforts on something small, you can derive a tangible benefit much sooner. But once those benefits are realised, you should already be thinking about the next most important datasets to analyse.

By doing this process iteratively, you can develop a consistent and efficient process for collecting and storing new data and ensure that you don't stagnate when it comes to improving operational efficient.

It is important to move quickly and constantly evaluate data, repeatedly.