Advanced Analytics in Supply Management for B2B businesses

Our solution leverages the power of advanced data analytics to timely identify risks in supply chain management and helps B2B supply chain businesses to deliver their promises in providing the right products in the right quantity at the right time.

Cluster analysis grouping supply chain orders according to different behavioral patterns.
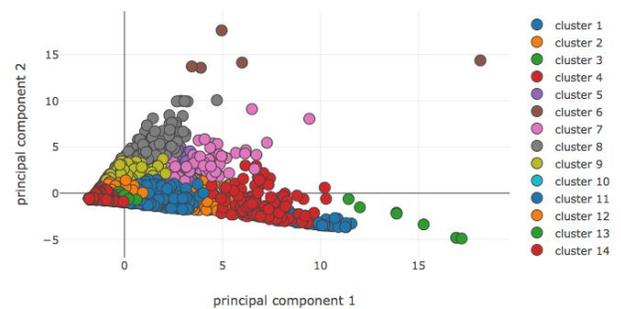
Our case study: Identifying high risk orders

In our case study, the key question is how to identify *a problematic order*. In other words, we want to identify high risk of failure to meet customer requirements and **detect orders whose delivery is seriously threatened.**.

For several hundred orders per day, which is typically a case by medium-size B2B supply chain businesses, it would be an extremely time-consuming activity to analyze every single customer and product by hand.

Therefore we use advanced analytical methods to search through the data and **tag high risk orders right on the very first day of the order.** The supply chain businesses can therefore manage such orders with the utmost care from the very beginning, which increases the probability that they will be successful.

Moreover, we are also able to analyze the **riskiness of individual orders as it develops throughout the time** and raise timely alerts in case an order is in danger.

Who is it for?

You can benefit from our solution especially if you are a B2B supply chain party, i.e. you do not sell products or services to the end customers. Typically you would fall into one of the following categories:

- **Supplier** - you provide raw materials or natural resources to manufacturers;
- **Manufacturer** - you produce finished goods through manufacture procedure and sell it to retailers.

In order for us to be able to fully leverage your data, the orders coming from your customers should be based on long-term projections (ideally 90 days and more) and all changes in quantity over time should be available in your data.

Our solution is especially helpful if you face unexpected order changes, cancellations or other issues that may lead to delayed delivery or inefficient production planning, as well as if you struggle with fragmented data (your data is stored in SAP or composed from many separated files).

Input data needed

The structure of data that we need is very simple and consists of records for each order as shown in the table below. Additionally, we aim to have at least two years history. If your data are stored in SAP, we will help you to create a connection and automate the entire process.

customer	product	delivery_date	order_date	quantity
1	010.671-017	2019-02-25	2018-09-11	408.00
1	010.671-017	2019-02-25	2018-09-12	408.00
1	010.671-017	2019-02-25	2018-09-13	408.00
1	010.671-017	2019-02-25	2018-09-14	408.00

An example of input data format

Output - what is it that you'll get ?

As mentioned above, you will get two kinds of results.

1. Tagged high risk orders at the time of the order

We use advanced clustering methods to obtain clusters (groups) of orders that are similar to each other from the behavioral point of view. Based on this analysis, we are able to identify high risk clusters and assign all orders the belong to these clusters with high-risk status.

Specifically, you will get:
- **A list of all clusters and their main characteristics**;
- **A list of all orders assigned to the given cluster**, i.e. we can tag high risk orders right on the very first day of the order according to the cluster to which they belong.

2. Riskiness alert for individual orders throughout the processing time

To assess the ever evolving riskiness profile of individual orders, we train a risk predictive model on your data using up-to-date information. As a result, you will get a **list of orders with the highest probability of getting into trouble every time the model is run** (can be every day, week....).

Insights put into practice

Having all these resources at your hand, there is just one thing left - **take an action.**

Utilising the insight and recommendations from the analytics will enable you to manage the supply chain risks proactively and approach the customer relationships in a much more informed way using hard data as a solid evidence.

Timely **identification of risky orders helps the team to focus on what matters with enough time to prevent a crisis.**

What now?

Do you want to see a demo of a PoC on your own data? Please get in touch.

About us

aLook /eɪˈlʊk/ is a data science boutique firm providing tailor-made, data-driven insights to businesses irrespective of industry.

Analytics can make a significant impact to the bottom line of our clients and that is what we strive for.