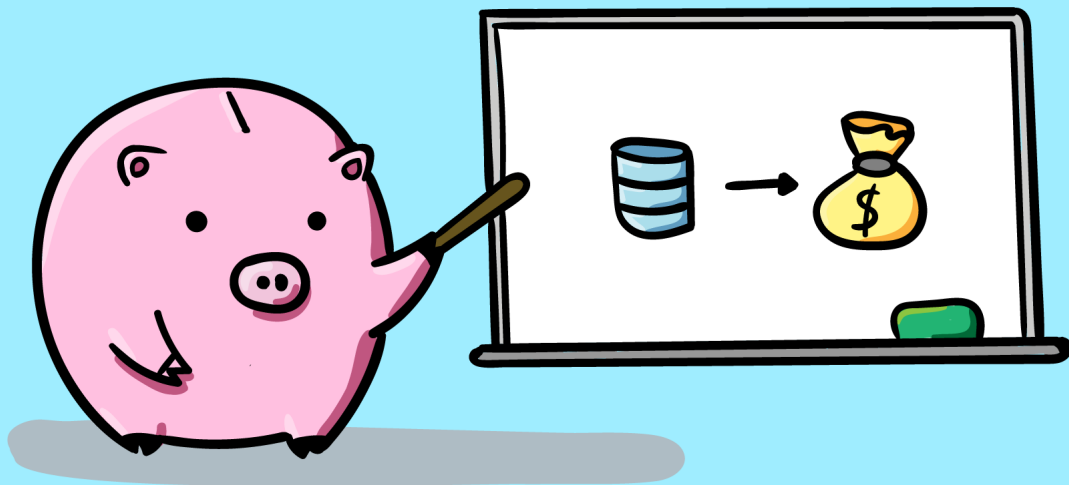


Sievo Spend Analytics Demystified



In Spend Analytics Demystified, Sievo's source-to-screen experts reveal the hidden world of advanced spend analysis from data extraction to collaborative classification to spend analysis.

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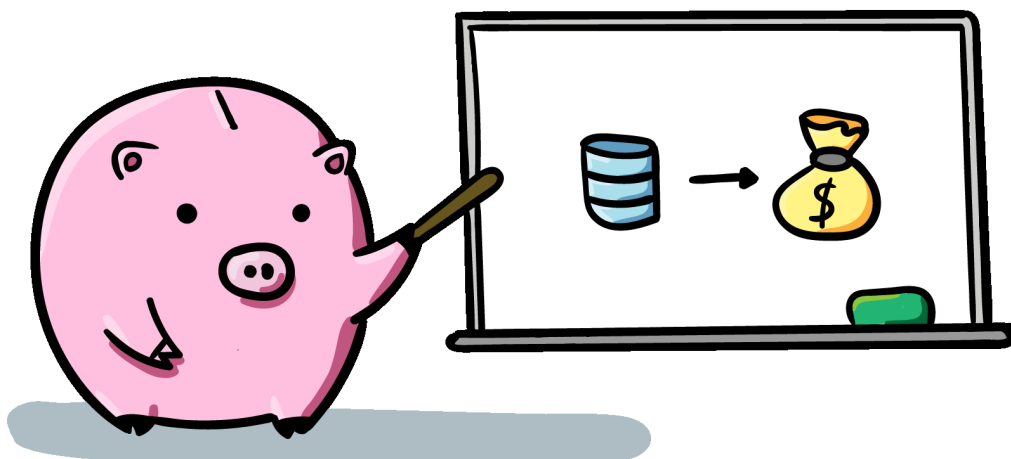
Welcome to Spend Analytics Demystified.

Get yourself immersed and lost in the complex world of advanced spend analysis. In this three-part series, Sievo's source-to-screen experts share the secrets using practical examples. Backed up with deep domain craft in the subject, they share the several key learnings on how one can truly maximize data and use it as a competitive advantage in this ever-evolving dynamic world.

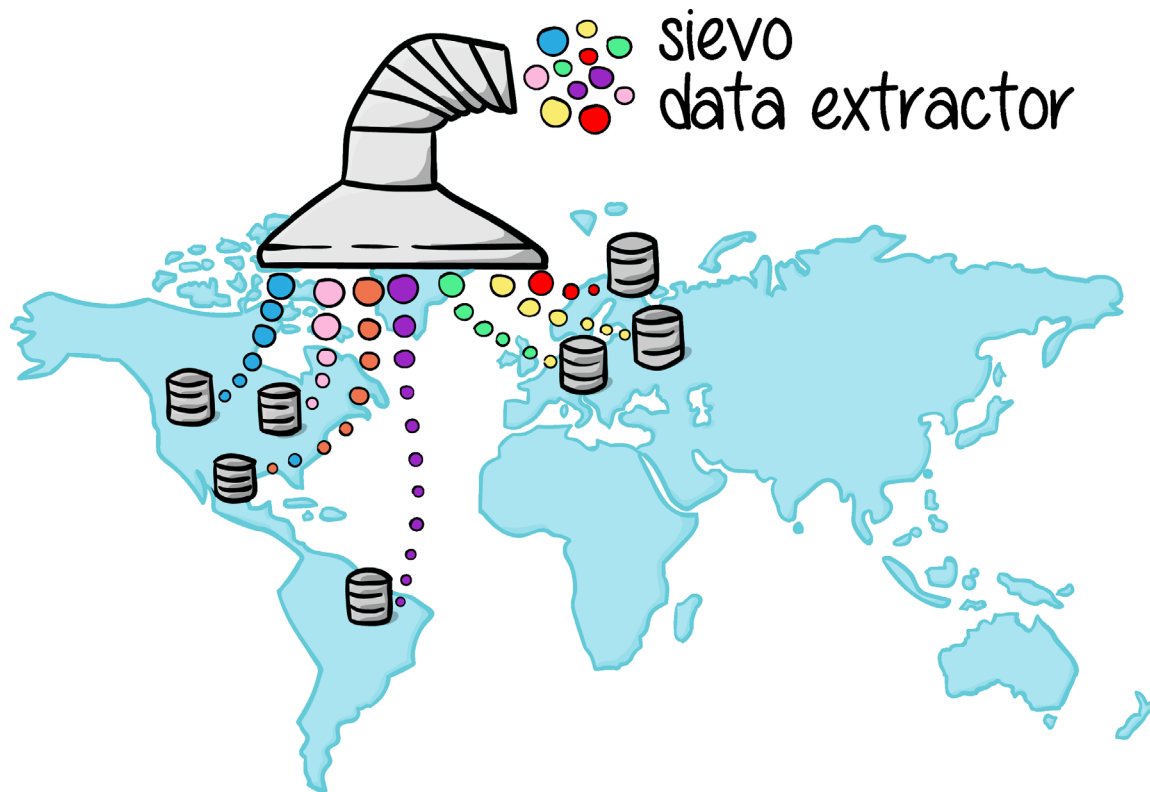
Grab a cup of coffee.

Read. Learn. Enjoy.

Spend Analytics Demystified



Part 1: Data Extraction



We all know that nowadays, data is everything. In fact, most efforts are focused on harvesting the data, but without much understanding which data has the most significance. No matter how important it is, unless you can extract the right data for your analysis purposes, you will get garbage in and garbage out. Pulling out large amounts of data out of myriad of sources without a standard interface can be quite a tedious task.

In a big company in a real business world, data extraction is a challenging task, which requires tremendous human and capital investment. On top of that, most systems weren't built for the intensive load an extract will put on them, especially internal databases that need to continue serving users during the data pull. Because of the unexpected amount of stress put on the servers, considerably big performance problems can occur during the process. The amount of data to extract and the amount of maintenance required result to pulling out data records out of systems longer than the time it is expected to.

The good news is, there's always a better way to do things. The Sievo Data Extractor is designed to connect and extract the most complicated and extensive procurement data from all kinds of data sources and deliver it for further analytical processing.

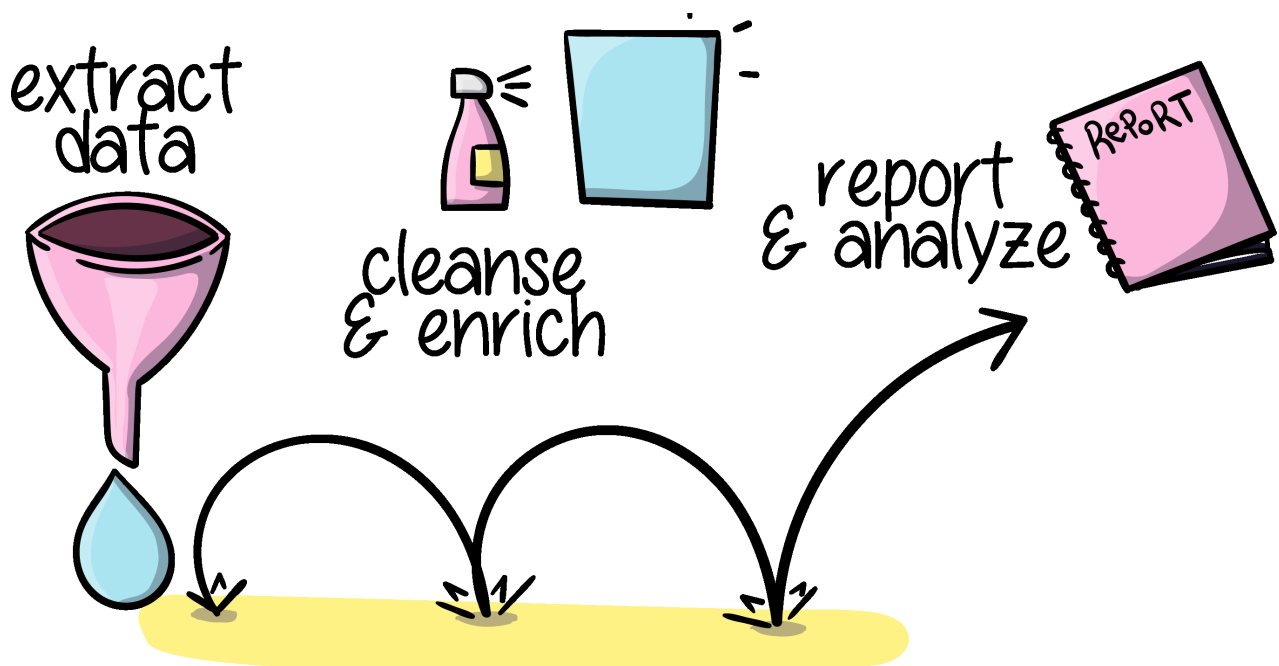
Here are 5 things on how the Sievo Data Extractor works its magic:

1. Even if extraction can be done in-house, using Data Extractor incredibly shortens the lead time as it takes away the erroneous manual work. It has a pre-configured template for extraction to take the correct data with possibility of additional data fields. The challenge of spend data extraction lies in the fact that you need to collect data from multiple modules of an ERP, in a way that you get a coherent view on spend. Building this logic is trickier than it seems at the outset, but luckily Data Extractor has prebuilt capabilities of doing this for most ERPs. Because the tool cuts away a significant amount of time and effort, there is no need to involve too many people in the whole process, like for example heavily involving internal IT which generally means longer lead times.
2. The tool represents an easy way to extract data from multiple systems with complete data security. Many companies like to have a full control over sensitive data, but this tool guarantees a secured way of extracting data, delivering it for further processing with a possibility for customers to still keep control.
3. Installed to a client's computer within minutes, and with its compatibility to practically any ERP, procurement and finance systems, it seamlessly captures all the data and pushes it to the Sievo cloud. Correct extraction paves the way for conducting quick data cleansing and analysis.
4. The tool allows us to monitor all processes, in cases of exceptions. We have all the tools to proactively fix the issues, and our unrelenting experience allows us to know how to react to errors such as connections not working or only partial data sets extracted. This results to more reliable processes and up-to-date reports with less support needed from the customer.
5. Once the data gets extracted, it is now ready to get enriched and cleansed . After the transformation logic, what you're left with is a clean, consolidated and filtered format which then makes the rest of the process easier and faster.

In a nutshell, with its trusted and ready-made plug and play templates, the Sievo Data Extractor Tool does the heavy lifting. With massive amounts of data on hand, the best chance of success is to work with the company who does not only have the technical expertise, but also understands the procurement data and has perfected this process. And Sievo systems have the ability to deal with all kinds of idiosyncrasies and challenges that make the extraordinarily dirty data, outdated and messy sources of information into an easy-to-comprehend format ready for analysis.

You may of course deliver the data to us, but why opt for that when we'd be happy to take them from you. With this powerful tool in our hands, all this can be done without compromising security.

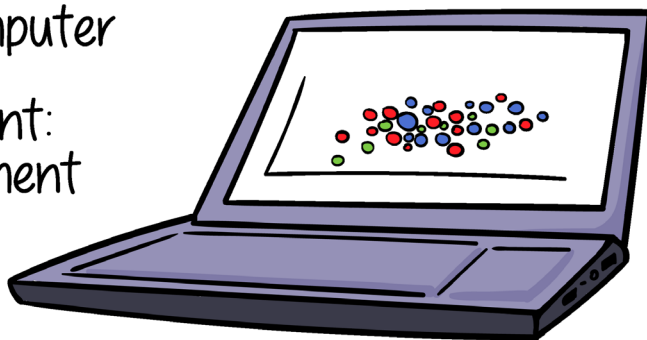
Pasi Viljanen
Head of Procurement Big Data



Part 2: Collaborative Classification

Invoice line
desc: Computer

GL account:
IT equipment



Maker: Dell

Vendor: Radioshack

Price: 2200e

Effective spend analysis is not possible without precise data classification. Without classification, everything is cluttered and unorganized. Many of the large enterprises Sievo works with have many ERPs, each having its own structure, material numbers, accounts and a lot more. Let's take the example of a laptop. In a larger organization, this one item can be called differently depending on how it has been sourced in tens of different ways, it can be Dell X260, Power Laptop, or perhaps Ordenador in Spanish.

Unifying heterogeneous spend data into clearly defined categories makes them easier to address and manage across the whole organization. Even with the example of the pen, knowing exactly how many pens are bought by different departments and subsidiaries of a company and at what price gives procurement the upper hand in negotiations with new vendors. So, in essence, classification is about harmonizing all purchasing transactions to a single taxonomy enabling customers to gain visibility to the global spending in order to make better sourcing decisions.

Once you've properly classified your data, results are presented in intuitive reports and dashboards right away. The harmonized data can then show potential savings and opportunities.

The answer to accurate classification is not a black box

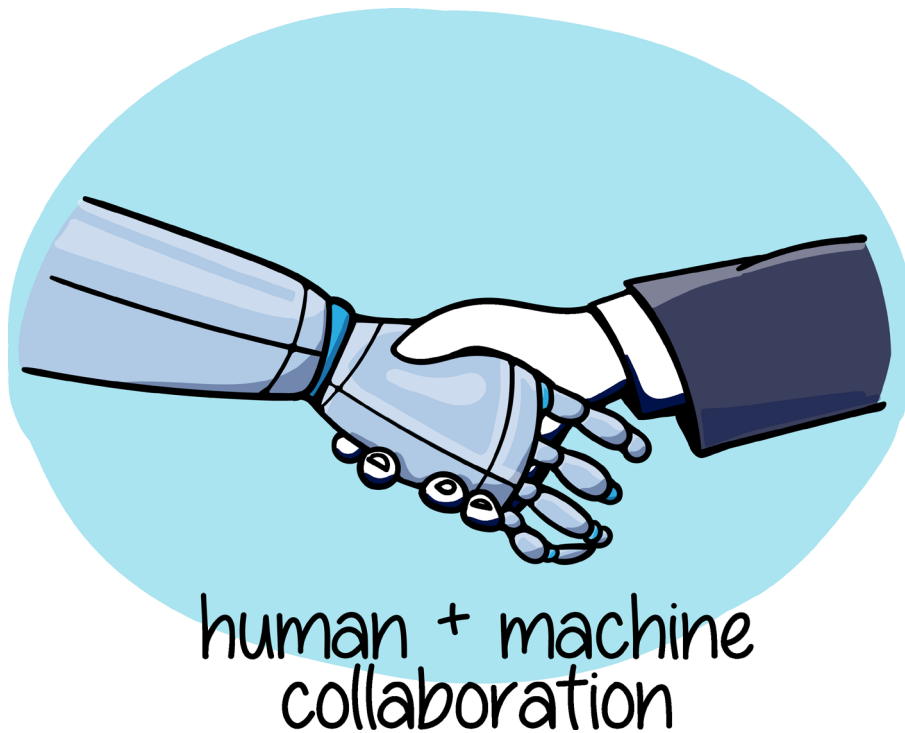
Complex data classification solutions are not always simple to implement, but they can be improved over time. What stands out with Sievo's data classification tool is that it's not a black box—it is transparent. Customers can see how information has been classified and make exceptions to the classifications where they feel necessary. For example, if one category is classified wrongly, it can be changed effectively as needed. Sievo empowers users to add data categorization based on their own business logic and they can easily classify data through intuitive add-ons and different levels of categorization. They can slice and dice data to smaller manageable chunks on any attribute. Hierarchical classification decisions enable them to manage and pinpoint exceptions both at scale and in detail.

The visibility for the customers makes the whole process collaborative as the customers can freely participate and make exceptions if necessary. Once classified, the information goes standard across the organization and users can see based on what data characteristics the classification has been done.

The key to success is collaborative classification

According to Spend Matters, Sievo's collaborative classification engine is one of the most distinct spend classification platforms in the market today. Not only does it break down spend into categories and sub-categories, the classification can also be assigned to customer category experts. This results in expert system implementation where the knowledge of the expert is capitalized in ensuring deeper level classification within a category or sub-category and resulting to higher level of accuracy.

For organizations with billions of dollars of spend, this level of collaboration is revolutionary. No one person can be expected to know the full organization's spend inside-out, but individual category managers can contribute to a more accurate level of classification, and the end result can be ground-breaking. The best practice in spend classification suggests at least 90% accuracy to identify spend opportunities, however reaching 95% or better accuracy level is crucial for savings tracking and management. As the further breakdown occurs for a deeper level reporting and tracking management, Sievo's collaborative classification approach allows spend to be mapped down to the last dimension 100% error free.



The future is human + machine collaboration

Even when category experts can improve classification close to the 100% error free level, there is still the question of prioritization. How many hours of an expert's time is worth spending improving the classification of less strategic, long tail spend?

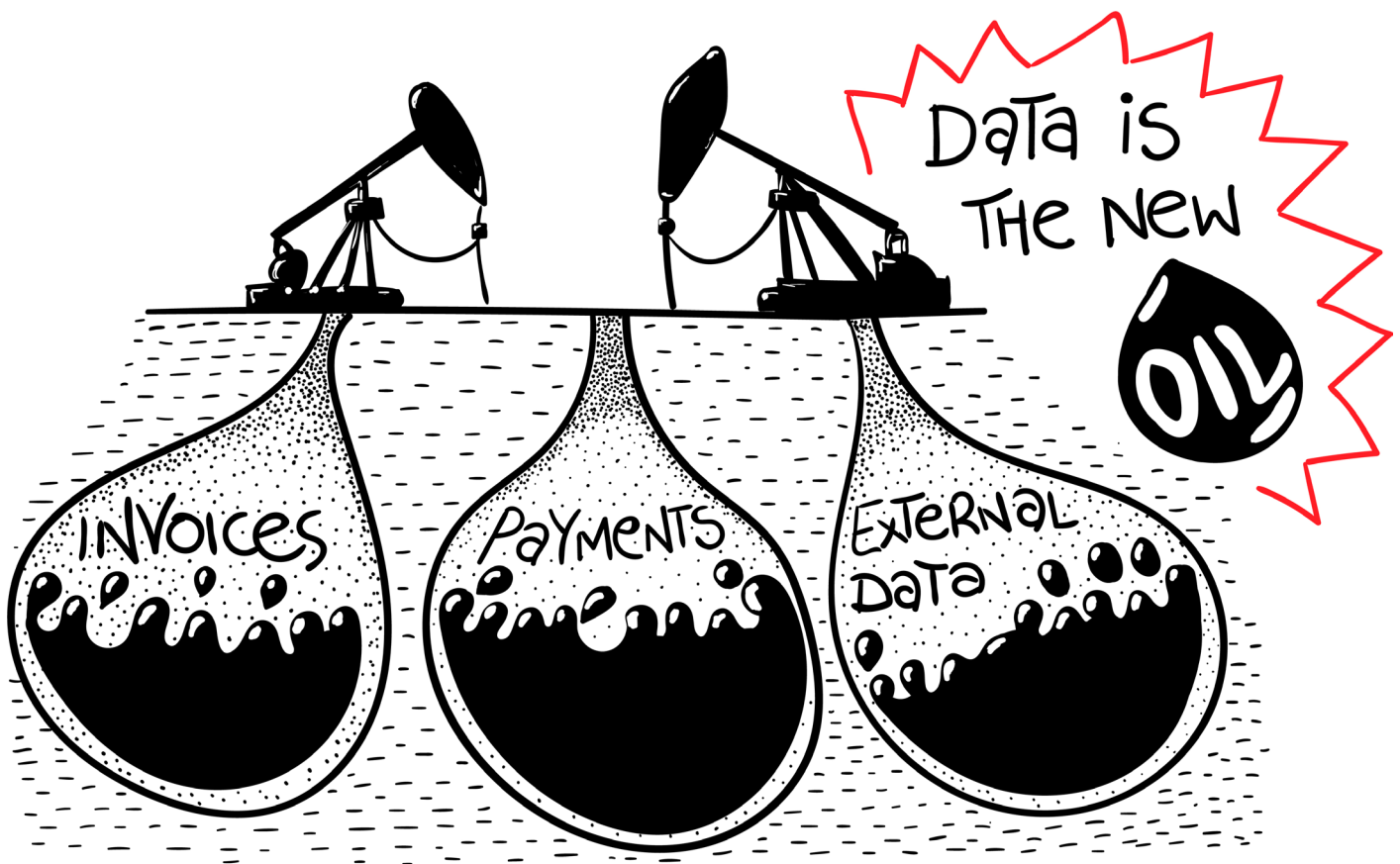
The answer to this comes from a relatively new field of computer science called machine learning.

At Sievo, we're developing an approach of human + machine collaboration, where the advanced knowledge of procurement experts is complemented by our own proprietary machine learning solutions. In practice, we continuously train computers to learn and adapt the classification techniques performed by humans. The more data computers see classified, the more they learn. This approach is currently tested with a limited number of clients, but we believe in the future we can reach even greater levels of precision on data classification by using the best skills of both humans and computers – the next stage in a truly collaborative classification experience for procurement organizations.

Janne Sakko
Senior Product Owner



Part 3: Spend Analysis



You've probably heard that data is the new oil. So has your CPO. Congratulations! Your company has realized the great value that your data storages bring. Be it supplier rationalization, identifying key vendors, Product Order coverage or supplier performance, your organization has endless possibilities in unleashing the potential value contained in your data. When we talk about analytics, we think about the detailed examination data and applying proper statistical methods to unravel new insights that support decision-making.

Perhaps you have heard about "data-driven decision making". During your data analysis project, the extracted data is refined like oil, as it is standardized, cleaned and properly categorized with your provider's collaborative classification process. When the data has been refined, you are ready to fuel up the analysis engine to navigate towards valuable insights. After all, refined oil is used to fuel up the combustion engines and our combustion engine is the analytics.

To steer the engine to a right direction, here are 8 key analytics insights that are key for competitive procurement success.

Spend overview

Viewing the spend overview gives you a summary of how your spend is performing compared to other points in time, such as last year, last quarter and so on. What are the trends and are mavericks causing our spend to be higher than usual?

Spend

584,6M ^{6,1%}_{change}

To know how you are spending and for what reasons is to know how much cost you are incurring, both in indirect and direct categories. The basis of all spend analytics is seeing how your spend compares to particular timeframes. This basic function has its roots in the stock markets, but it has found in use in procurement analytics. KPI Visualizations indicate the trends of your spend and are dynamic, responding to your drill-downs and data slice-and-dice operations.

No of suppliers

114 ^{37,3%}_{change}

Avg payment term

54,68 ^{0,8d}_{change}

No of materials

67 ^{6,3%}_{change}

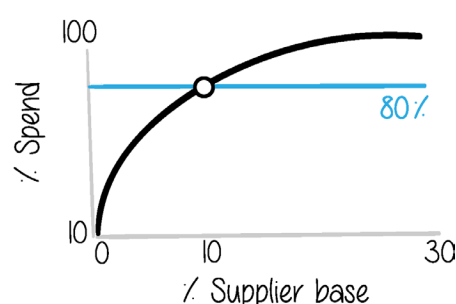
Contracts expiring

1 ^{69%}_{of total spend}

Spend distribution by supplier

Pareto principle, created by Vilfredo Pareto, is a cornerstone representation on how to represent spend. The Pareto principle shows you how much your suppliers have an effect on your spend and if certain categories are in the hands of a few, or one, supplier. The effect that a sole supplier can have on a category is immense as it can take out all the leverage from negotiations. Relying on one supplier in a category has to be carefully thought out, as it can remove your advantage from negotiations.

Supplier pareto

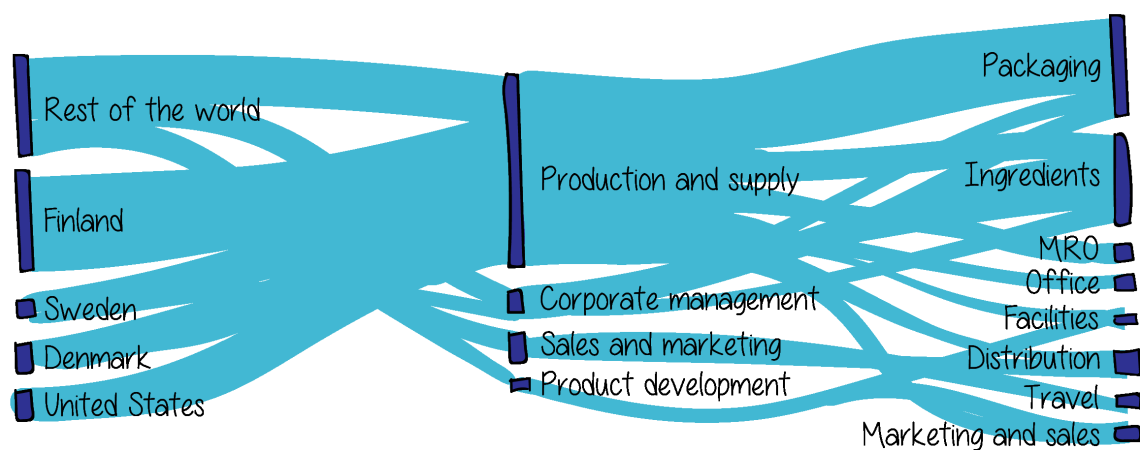


Having a solution that offers you analytics capabilities that offers a view to categories, geography and time-periods is crucial. Creating this type of analysis from scratch is timeconsuming, but fortunately out-of-the-box solutions exist in the market.

Visualizing the spend-flow

Procurement analysis comes in many shapes, sizes and forms. The amount of dimensions open up different possibilities to get insights on how your organization is performing with its spend function. However, this is not an easy task to execute correctly, as the visualization options make the possibility of presenting data too easy.

Spend flow

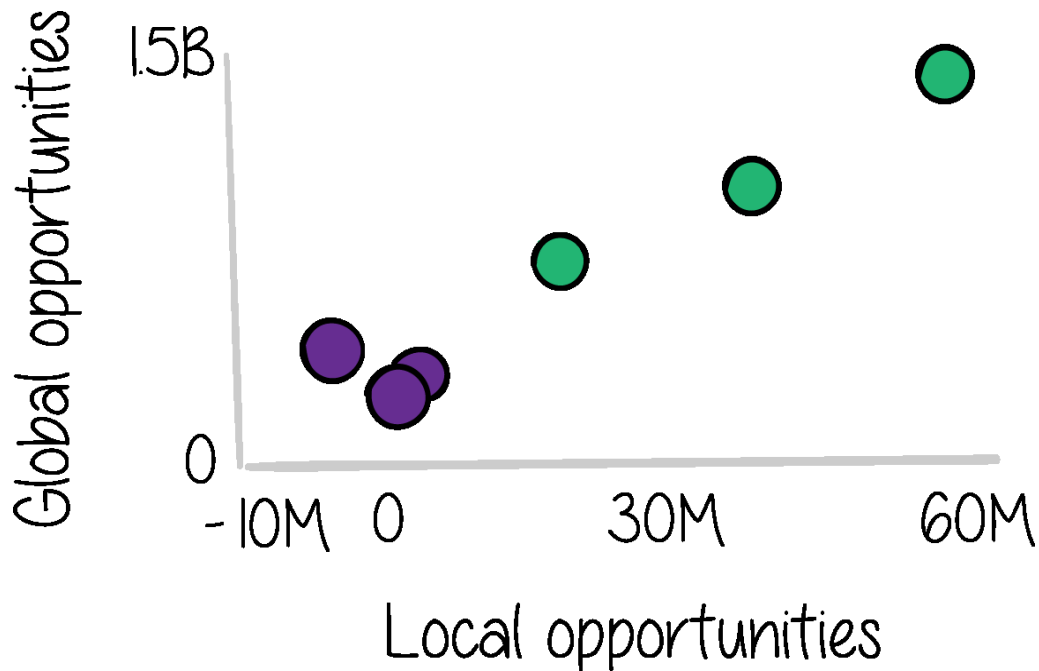


This usually ends up in a table and chart heavy dashboard, that can be hard to decipher unless you are a seasoned data analyst. The best way to get this information out is to create a visualized spend process. A flow-process allows you to present your data story in a way that is easily understandable outside your data analyst team.

Price opportunities

Procurement analytics is an artform that helps your company to unlock hidden potential lying in your data. A big potential lies in the pricing of your direct spend materials. Diversifying the purchasing to multiple suppliers produces pricing data that enables you to benchmark giving you information on where the best supplier price is. This can be taken into even more detail with peer benchmarking, where your spend data is compared with data from your supplier, expanding your possible spend saving opportunities.

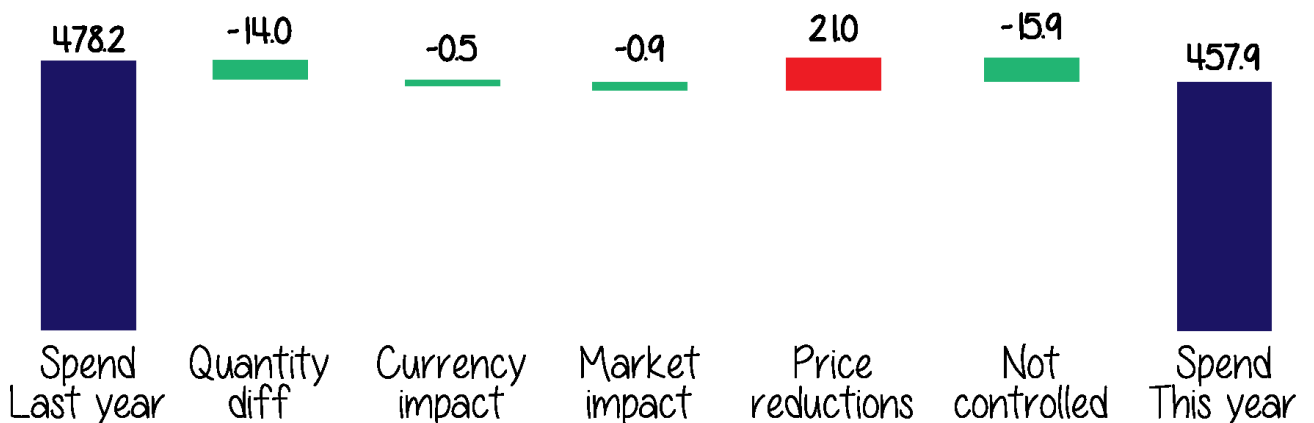
Using price alone is not the best metric, so any opportunity related reports should be completed with other factors like on-time delivery, quality and opportunity fill rate.



Using the information provided by the system helps you in negotiating with sub-optimal suppliers so it is possible to match the best supplier price without sacrificing other supplier KPIs.

Everybody loves a waterfall

Communicating your cost reductions that stem from your savings program implementation is a key aspect of analyzing your spend. If your cost reductions can be tied to your executed savings plans, it provides great benefits for your business. The cost reductions do not always bring benefits however, as they can be tied into changes in the seasonality, price fluctuation and currency shifts. Knowing where to attribute the spend change gives you a chance to do a gap analysis, making way for a powerful way of explaining the results to your stakeholders. The best way to do this is using the waterfall chart.

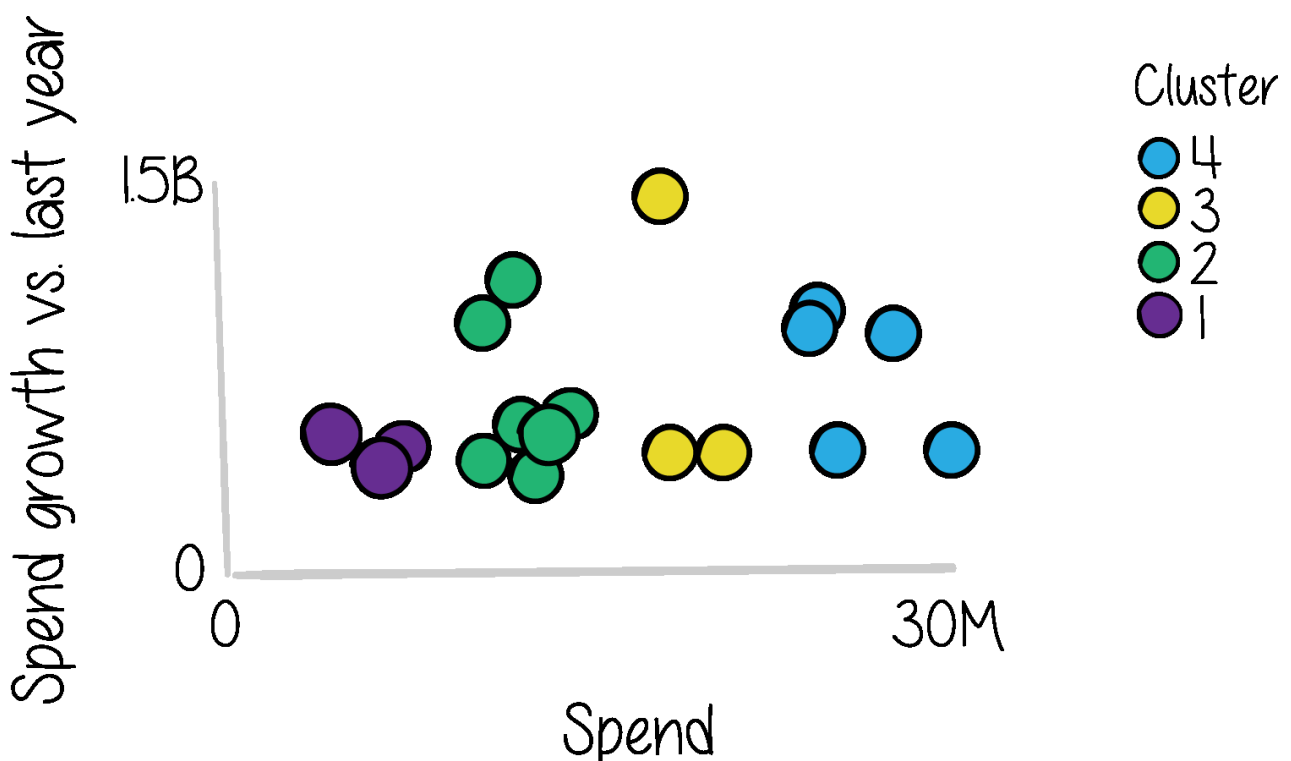


Purchasing is usually tied to a process, but how many are actually adhering to it? The first step is to compare the spend and how it ties to the process. If a particular invoice has been paid and you can see it linked to a particular purchase order, then that spend is in control. This is not a deep enough coverage, as many organizations tie their Purchase Orders to just one field.

It is better to figure out if the PO is matched properly to an invoice. This way, you can be assured that your process is stable and does not have any blind spots. You are able to identify maverick spending and address it correctly as this information can be sliced and diced to category, business unity and even supplier level.

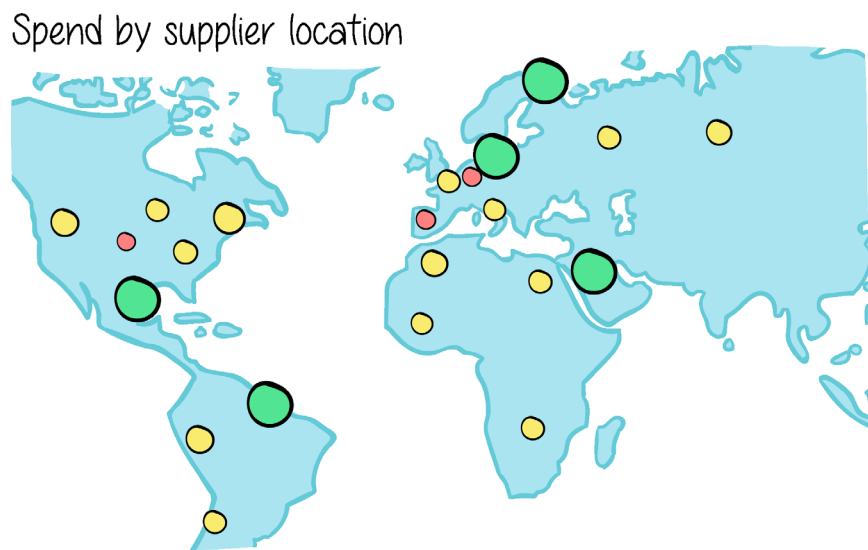
Supplier segmentation

The variety of suppliers creates a need for optimization, so segmenting the suppliers by different variables is the key on going forward. One example is looking at your biggest suppliers and their growth in spending and comparing it to the previous year, showing you a matrix of high-low growth and high-low spend. This data can then be cross referenced with your category data.



Geo-spatial analytics

Although a lot of analytics providers offer a geo-spatial analysis capability, a very few of them offer actual value to the user. A quick improvement for creating value would be using different colors and data point sizes when mapping the data. It could be for example the supplier location spend value (size) and then spend growth for supplier compared to the previous year (color). This gives you a way to show instantly where a problematic spend is occurring. You could also do an analysis by a particular material and see where the material is sourced from and consider different supply chain optimizations.



These are just a few ways on how to create insight driven analytics and practice has proven that there are tons more ways to analyze the data. Remember, the more you simplify your approach, the more effective you will be in communicating the insights found in your procurement data. The moment you deliver simplified and palatable analytics insights for the purpose of aiding stakeholders in making decisions is the key moment when your procurement function gains competitive advantage. Data is being produced in vast amount daily and it can be easy to get buried in all of that. The variety of spend analytics vendors offer you many different ways of getting insights, but only a few can deliver the insights that precisely work for the user groups in your organization.

With Sievo, you can be assured that the data is in good hands. Sievo helps you to understand your procurement data better.

Heta Ruikka
Team Lead, Analytics



About Sievo

Sievo is a leading procurement analytics SaaS-based solution company that provides spend visibility, but also goes way beyond that. We help our clients identify opportunities, translate these opportunities into projects, embed created value into budgets and ensure that savings truly hit the bottom line. We speak the language of procurement and also translate numbers into the financial view.

Our solution is used by thousands of users in best-in-class procurement organizations, such as Deutsche Telekom, ISS and Kellogg's. With our clients, we don't stop at backward-looking reporting but deliver more by creating forward-looking forecasts and comprehensive analytics. We combine internal information with external data sources. With Sievo, human input and machine learning technologies are integrated together. In short, we translate procurement data into dollars.

Since our founding in 2003, we have experienced rapid, profitable and self-financed growth. Currently we employ more than 100 professionals and have offices in Europe and US.

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