

In a world that is flooded with data, access to the relevant pieces of information is essential.

The current State-of-the-Art

At a Consumer Goods Manufacturer, more than one million consumer comments are processed every year. The consumer support teams processes consumer comments in detail, by reflecting the verbatim in order to understand the reason for the comment and to link it to a specific product and/or consumer comment code in the system. Currently, coding is defined trying to meet requirements of standardization and high resolution. However, the successive analysis of the data by comment code and product does often not provide the required level of insight, specifically when a deeper understanding of the consumer comment is required. In this regard, new tools must be found that allow for a free exploration of the verbatims.

Innovation by Argument-Mining

summetix' ground-breaking approach allows for in-depth analysis of customer verbatims. Compared to traditional surveys, Argument Mining will enable **unbiased, faster and cheaper** gathering of product improvement potentials by condensing large amounts of data to key insights 1000 times faster than a human reader.

Argument Mining technology reduces the amount of text to be considered by 90% by solely **extracting relevant arguments** to the search term or **freely explore** the focal points of the customer feedback. For a hair dryer, for instance, this might include information about yet unknown failure patterns or a known issue such as a heating problem. All arguments are classified as positive or negative which allows to identify the relevant verbatims for the search term and mark them accordingly.

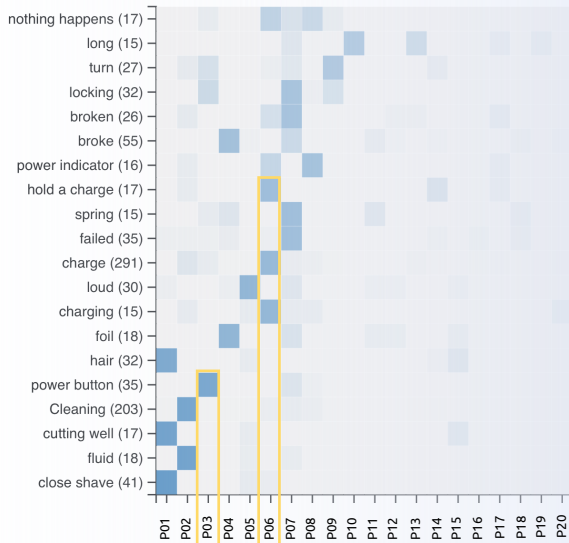
To identify **key topics** the arguments will be automatically clustered by our AI. As summetix does not rely on predefined dictionaries, the system can identify topics **without defining categories in advance**. In essence, this allows to get **fast qualitative as well as quantitative insights** on any given topic or product. The following pages guide through an exemplary case from the grooming device unit, along the steps of our analysis pipeline:

- 1. Exploring the most relevant product problems:** Clusters are individually formed and displayed in a Heatmap. It provides an overview of the most pressing problem patterns across all product categories.
- 2. Quantifying their impact:** A cake chart leads to a quick understanding of the extent of identified product problems and enables further quantification of the problems.
- 3. Localize the problems and finding the root causes:** With the disproportionality analysis, root causes of product problems are localized. The approach helps to find the unique product problems and link those to a specified production period, a production site or a specific sales market.

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1. Exploration of Key Topics in Consumer Comments

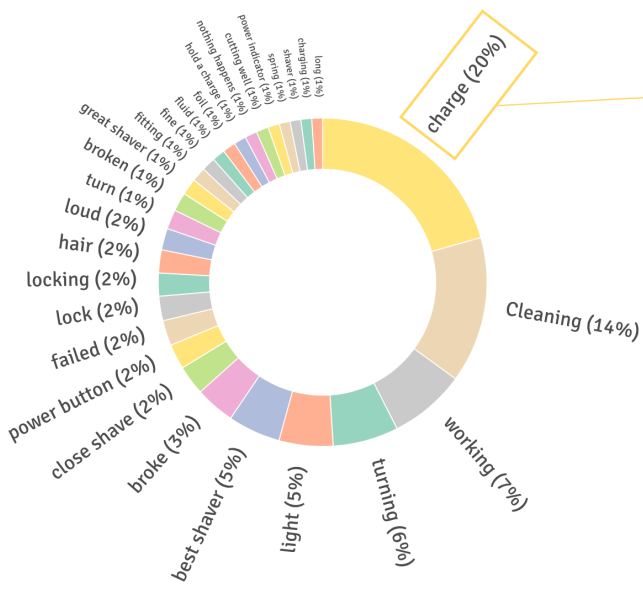
Key topics and their **correlation** with products in comments about grooming products.



The chart shows key topics on the left and Product IDs at the bottom. Darker spots in the chart mark higher correlation. We can see that the **power-button** related issues occur **primarily with the P03**, while **charging-related** issues seem to occur more often with **P06**.

2. Impact Quantification of Key Topics

Key topics and their overall **impact** in comments about grooming products.



Con
Total number of arguments: 291

The Shaver will not charge no matter how long it is plugged in. [\[show full document\]](#)

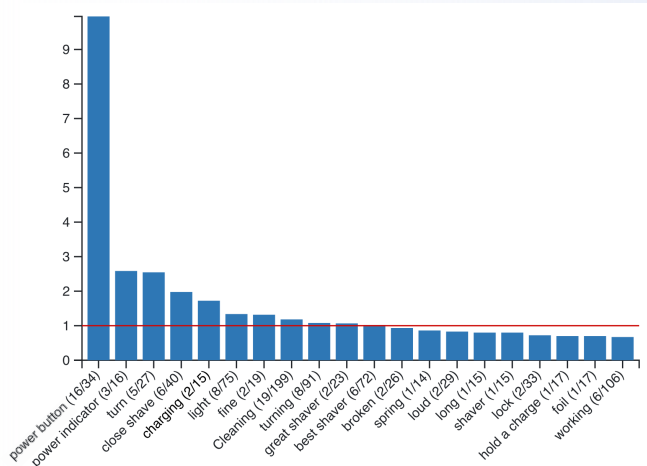
I tried to recharge the shaver and it is still not working. [\[show full document\]](#)

The diagram to the left shows key topics and their size – indicating their **relative impact**. For each key topic, the underlying arguments and their stance (pro or con) can be inspected. In the example above the **first arguments** in the **"charge"** cluster are shown.

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3. Narrowing down the individual topics to specific products

Disproportionality analysis for a particular product across key topics.



The chart shows key topics at the bottom, sorted by a **disproportionality factor**. This factor is a statistical measure of whether and how much a key topic **exceeds the average expectation**. Everything value above the red line exceeds the average expectation. I.e., the key topic **“power button” occurs much more frequently** with the selected product, as compared to all other products.

Capability Comparison

The following table compares summetix’ capabilities with alternative approaches: A fully manual approach (trained working students who label arguments and key topics by hand), a tool for automating customer surveys using quantitative research methods, and a full-blown solution for customer experience management across multiple channels. summetix’ unique approach serves insights that are otherwise only possible with customer surveys. Instead, summetix is fully data-driven and operates in real-time.

Approach/ Tool	Real-time Operation	Recurring Manual Setup	Customer-Owned AI models	Deep Drills based on Free Text Search	Free Exploration of Key Topics	Works on Internal and External Data	Allows Competitor Comparison
summetix	Yes	No	Yes	Yes	Yes	Yes	Yes
Working Students	No	Yes	No	No	Yes	Yes	No
Quantilope	No	Yes	No	Via Surveys	Via Surveys	No	Via Surveys
Qualtrics	Yes	No	No	Yes	No	Yes	No

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Financial Implications

summetix generates enormous benefits to the customer in three distinct ways. Firstly, by **reducing costs** for text analysis drastically. As the AI is reading text **1000x faster than humans** it can shorten analysis time from a **month to 10 minutes**. Secondly, better and faster consumer insights **reduce risk of crises** and **subsequent revenue losses**. Thirdly, increased customer satisfaction based on better customer understanding **boosts revenue growth**. Lastly, automizing repetitive tasks improves **employee satisfaction** and **reduces turnover**.

Base Case

X	Number of employees/department	20
X	Average annual salary	\$ 100,000
	Share of time spent on analysis	20 %
Costs feedback analysis/department		\$ 400,000

X	Costs customer feedback analysis	\$ 400,000
	Conservatively estimated time savings for first analysis, drill down and reporting	50 %
Annual cost savings/department		\$ 200,000

The above example shows an example of **potential cost savings** with summetix. Regarding reputational risk and subsequent revenue loss, summetix proved that it can both detect known product **issues 3 - 6 months earlier** and even **detect unknown product issues** (see case below).

Best Case

\$ 47,8 bn	×	18,8 %	=	\$ 9,0 bn
Est. Revenues		Company's Market Share		Total Net Sales

\$ 172 mn		\$ 2000
Pot. Weekly Net Sales Lost		Weekly Costs for summetix

Annual cost of summetix of **\$ 100,000** would **offset** if **one week of company's revenue losses** are prevented **every 1720 years** (not including spillover effects).

Furthermore, fast **reaction to issues** is key to maintain **high levels of customer satisfaction**. summetix will help **understanding the why** behind consumer actions in minutes and help **improve customer satisfaction** and **reduce churn rates**. Studies found that **existing customers spend 140% more** than new customers and **7% increase in Net promoter score** can increase **revenue by 1%**. In summary, summetix offers a **unique range of capabilities** and provides **deeper and faster insights** compared to any other approach.