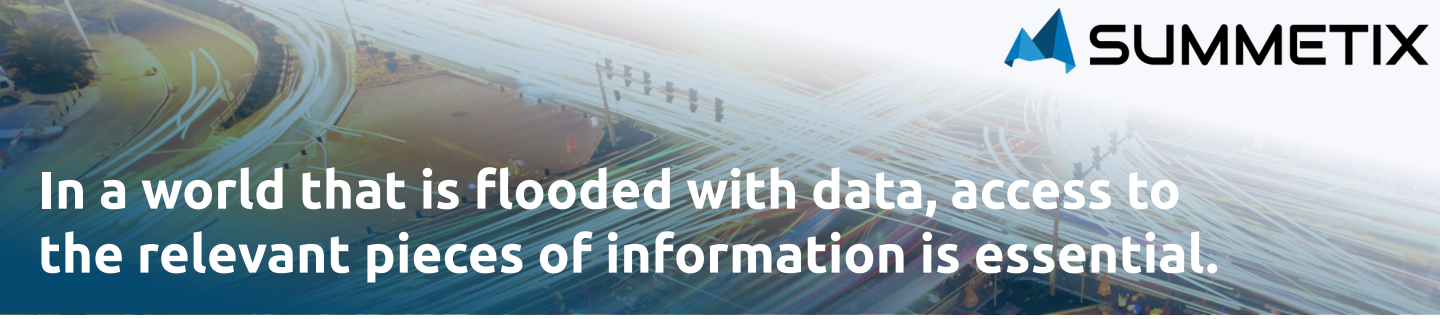

# In a world that is flooded with data, access to the relevant pieces of information is essential.

## The current State-of-the-Art

A large car manufacturer has established a processes to analyze consumer comments and complaints following issues and car defects. The analytics team of the relevant department processes consumer comments in detail, by reflecting the verbatim in order to understand the reason for the comment and to link the comment to a specific product or consumer comment code in the system. Current 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. The latter typically happens when the comment volume for a specific product raises unexpectedly, or when a known incident should be analyzed and quantified in depth. 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** for a search term, a given product ID or the entire business unit. 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.

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 emerging topics completely autonomous**. In essence, this allows to get **fast qualitative as well as quantitative insights** on any given search term, product or business unit. The following pages guide through an exemplary case, 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 network graph leads to a quick understanding of the extend 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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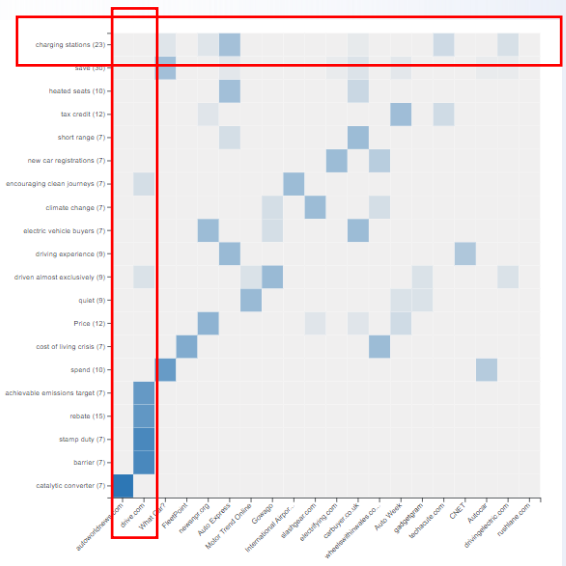
## 1. Exploration of Key Topics in Consumer Comments

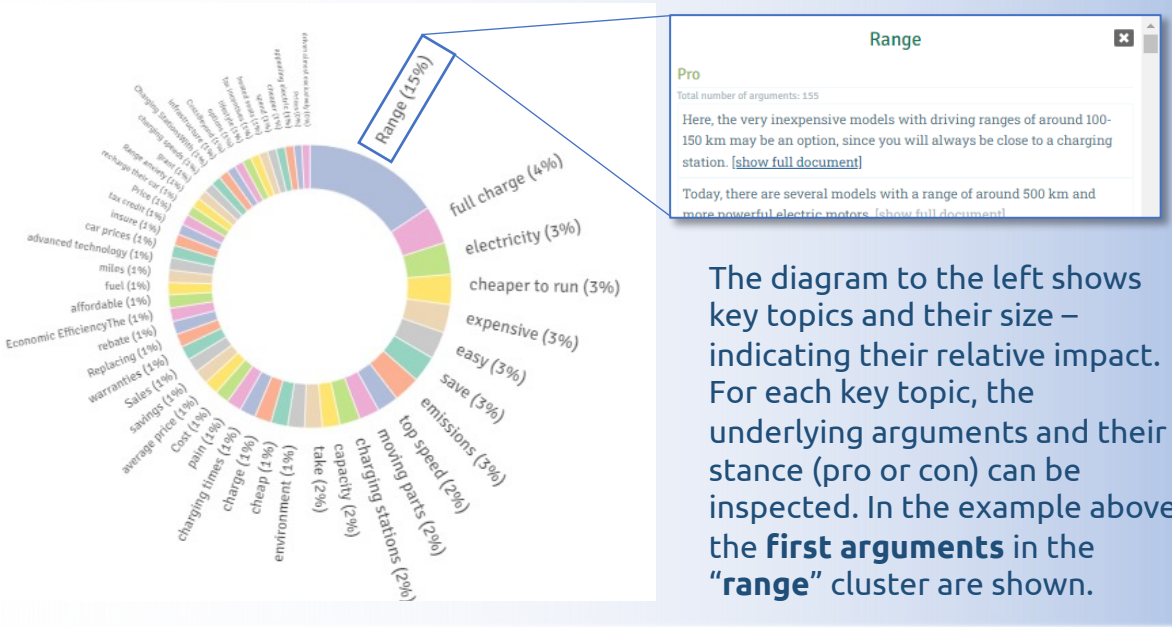
Key topics and their **correlation** with products in comments about electric cars.




The chart shows key topics on the left and magazines at the bottom. Darker spots in the chart mark higher correlation. We can see that the **drive.com** talks about **rebates,** while many magazines talk about charging stations.

## 2. Impact Quantification of Key Topics

Key topics and their overall **impact** in comments about electric cars.




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 "**range**" cluster are shown.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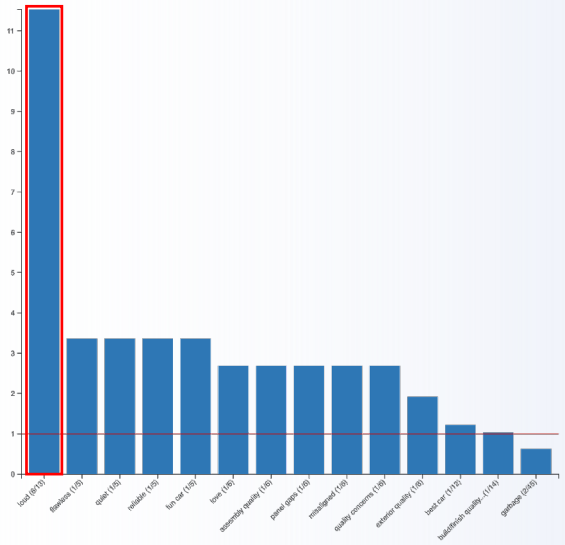
## 3. Narrowing down the individual topics to specific products

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 (everything above the red line) and how much (score on y-axis) a key topic exceeds the average expectation. I.e., the key topic “loud” (complaints about noise while driving) occurs much more frequently in the past month compared to previous months.

## Capability Comparison

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

| Approach/ Tool | Real-time Operation | Questions Consumers Directly | Recurring Manual Setup | Customer-Owned AI models | Deep Drills Free Text Search | Free Exploration of Clusters | Internal and External Data | Competitor Comparison |
|---|---|---|---|---|---|---|---|---|
| summetix | Yes | No | No | Yes | Yes | Yes | Yes | Yes |
| Working Student | No | Yes | Yes | No | No | Manual analysis | Potentially | Potentially |
| Quantilope | No | Yes | Yes | No | No | No | No | No |
| Qualtrics | Yes | No | No | No | Yes | No | Yes | No |

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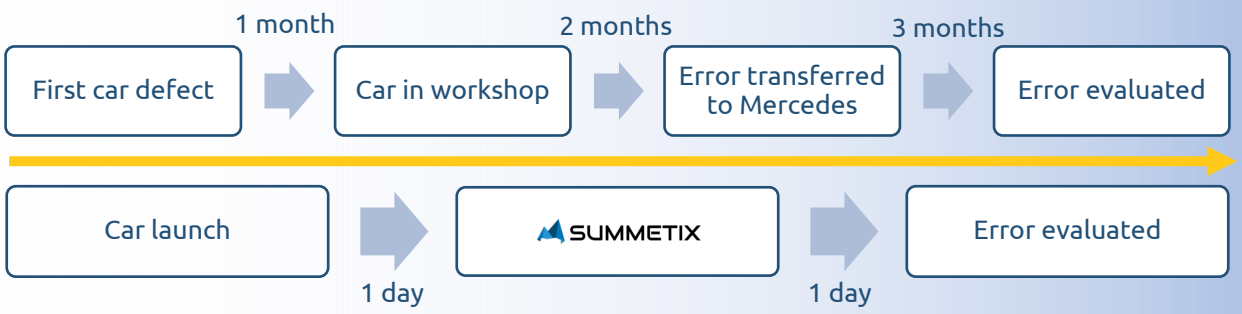
## Financial Implications

summetix enables financial savings in various dimensions. 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 loss. Thirdly, increased costumer satisfaction based on better customer understanding boosts revenue growth. Lastly, automizing repetitive tasks improves employee satisfaction and reduces turnover.

| | |
|---|---|
| Number of employees/department | 20 |
| × Average annual salary | $ 100,000 |
| × Share of time spent on analysis | 20 % |
| **Costs feedback analysis/department** | **$ 400,000** |

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

Above an example on potential cost savings with summetix can be seen. Regarding reputational risk and subsequent revenue loss, summetix proved that it can both detect known product issues 3 months earlier and even detect unknown product issues. Find the old and new process illustrated below as well as the most important advantages of using summetix.




- Save millions of dollars by fast and efficient product issue detection and avoiding reputational crisis and subsequent revenue decline
- React fast to customers suggestions and innovate your product one R&D life cycle faster
- Use external and internal sources to justify anecdotal evidence in seconds

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%.

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