

## Discovering competitive strategies, accelerated with TechMining

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### Introduction

Profiling the technological strategy of different competitors is a key element for the field companies, as well to technology planners and R&D strategists. The analysis of the patent portfolio of a company as well as its evolution in the time line is of interest for profiling the technology strategy of a company, however normally such analysis need the participation of experts in the field of a company as well as patent specialists. Bibliometrics and text mining techniques contribute to the interpretation of specialists. The following contribution tries to offer a step by step procedure to analyze the technology strategy of several companies with the help of TechMining and the use of VantagePoint as a text mining tool. Said procedure, complemented with a semantic TRIZ analysis can provide key insights in disclosing the technology analysis of some competitors.

For centering the strategy through the analysis of patents one of the key fields to study is the claims field, where companies define the core invention they pretend to defend of potential competitors. While counting number of claims being it independent or dependent, may have not be very reliable as a measure of technology relevance, the analysis by natural language processing can extract and correlate the key elements of their technology, disclosed in independent claims and complemented in dependent ones.

We have analyzed the content of the claims of at least two competitors in the animal production sector, and have plot the evolution of different components of a technology to see which are emerging, which are decreasing and, if new elements enter into the technology

By means of the following steps:

1 to extract by means of natural language processing the terms of the claims

2 to remove common noisy terms via fuzzy matching, manual touchup using groups and further applying thesaurus grouping as well as some further clustering scripts

3 to generate a factors map to extract the main terms (term clumping strategy could also be used) Also not to forget that newest terms (still nascent) could also be critic

4 to plot such terms in Gantt / bubble map to see the emergence and trend of key terms and classifications

5 to compare the map of different competitors

Also this key judgement could be complemented with a functional semantic TRIZ map to understand the role of each term.

### **Data and Methods**

We have been addressing data about the gut health in livestock and husbandry related animals. After the European Union ban of antibiotics as growth promoters (AGP) in animal production, on January 1 2006, a high interest on alternative methods to improve the performance of livestock has been observed. Furthermore, a significant reduction of antimicrobials as therapeutics is also a principal objective of EU for the next years. Promoting gut health with probiotics, prebiotics and symbiotics are the main alternatives as AGP . We have conducted a study in livestock to assess gut health as a matter of interest in the industry sector of animal production. We have analyzed patent records of this field in order to understand how the animal industry is focusing its activity. The search in Thomson Innovation brought about 1993 patent families with a time span of year 2000 through 2015, who are indeed dedicated to animal gut health and not mainly to humans. From which, as a way of example, two of the most prolific competitors, as Nutricia or Nestec, have been analyzed according to the steps described before. The results show that such analysis can be done in faster way by using techMining techniques.

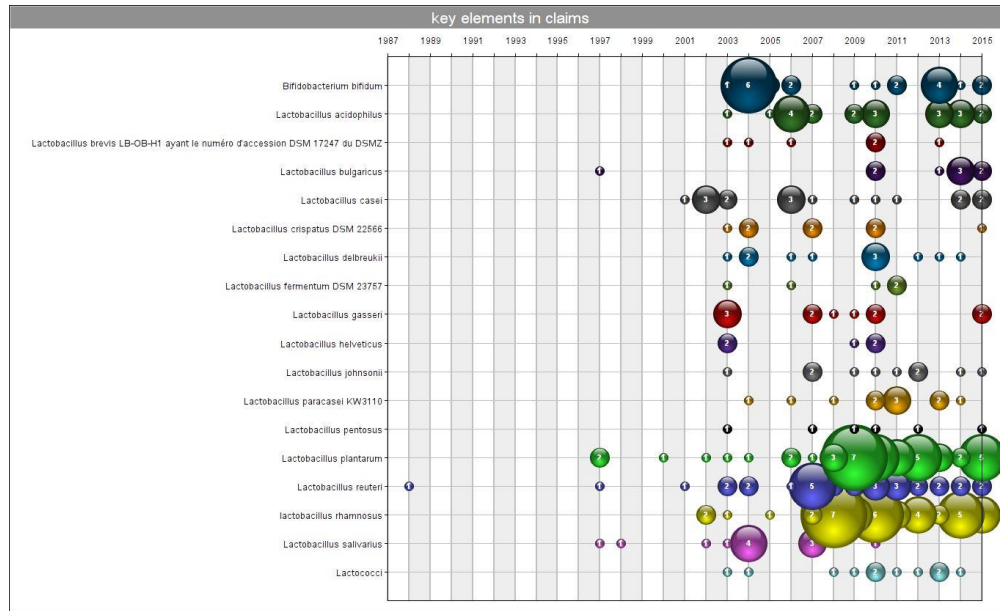


Figure 1 Example of Trend of key elements in independent patent familie claim

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