Using Big Data For Strategic Communication
The Big Data Application Process outlines 7 steps for using big data

► Corporate Communications still lags behind when it comes to big data. Only a handful of communication departments have implemented big data activities. This is mostly down to a lack of analytical and technical skills together with the lack of time to become familiar with this topic.

► To support communication experts we have developed a big data application model and outlined the most critical prerequisites for getting started with big data, including technical issues, organizational set-up, competencies and ethical concerns.

Benefits of big data for communications

Big data enables corporations to better understand the needs, opinions, attitudes and behaviors of their stakeholders. These insights are also extremely valuable for strategic communication since it seeks to engage with stakeholders on the most interesting topics and via the most suitable channels

From the planning to the evaluation of communication, big data analyses can make corporate communications more analytical and thus potentially more strategical and successful. There is no question that communication managers need to understand the process and potentials of big data analyses.

Building on a well-established model from IT and combining this with the strategic communication planning process, we have outlined 7 steps of how communication managers can use data.

7 steps to use big data

❶ **Defining goals:** Asking clear questions and defining measureable goals is the basis for successful big data analyses. As easy as this sounds, many corporations do not have clearly defined goals.

❷ **Collecting data:** The sources for the data collection as well as the frequency and time period are defined in the 2nd step. The volume, velocity, but especially the variety of data is essential for big data applications. However, the different data formats (numbers, text in different languages, pictures, videos etc.) makes the process very complex.

❸ **Data cleaning:** Spam as well as bot generated contents and irrelevant data need to be filtered out. This happens usually via algorithms and is later double checked manually. This can be a very time-consuming process, but it directly affects the quality of the analyses results.   ►

The Big Data Application Process
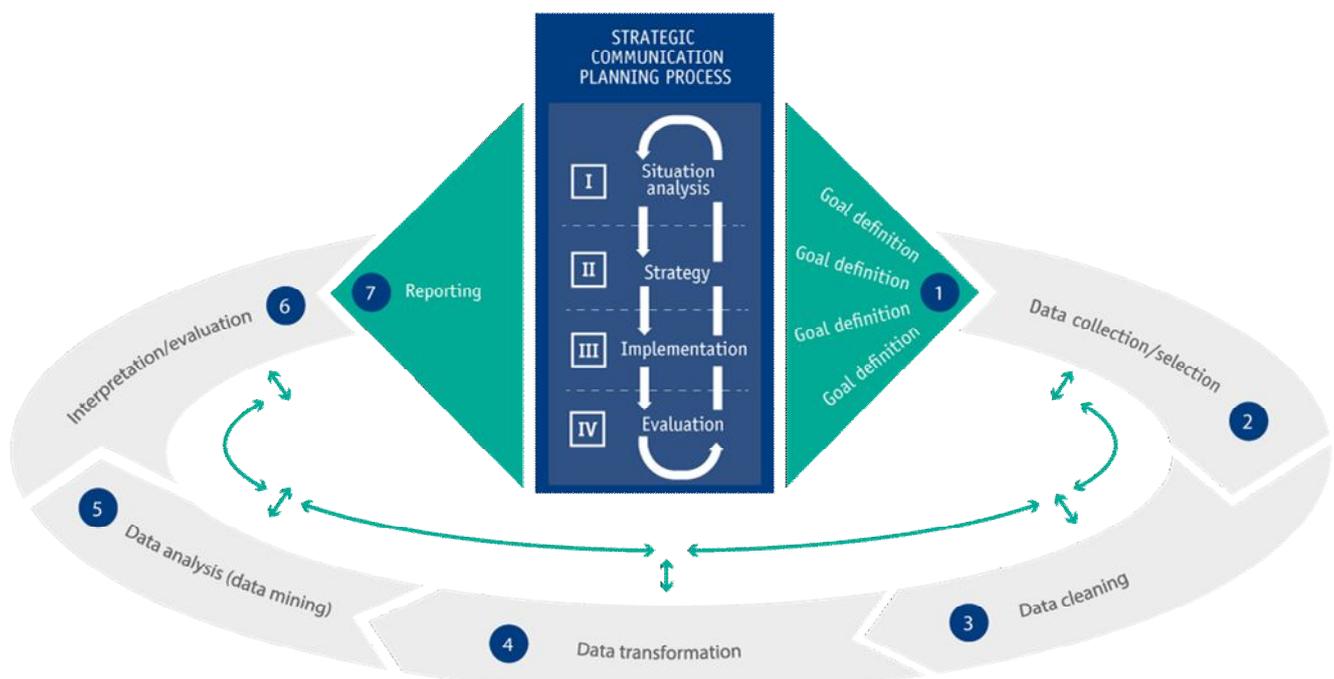
❹ **Data transformation:** Raw data is transformed into standardized data formats to allow for easier processing. Furthermore, data quantity is reduced by bundling variables with similar features.

❺ **Data analysis (data mining):** Descriptive, diagnostic and/or predicative analyses are run to extract knowledge from the cleaned data. This happens through algorithms. These search for patterns, correlations and trends.

❻ **Interpretation / Evaluation:** The findings of the data mining are now interpreted to derive recommendations for action. To ensure the quality of the data analysis, the entire process is evaluated according to the question: Have we reached the goals defined in the first step?

❼ **Reporting:** As the last step the findings are summarized and visualized for the management using certain KPIs. This result can guide future decisions and can also be automatized.

These seven steps can be applied to each phase of the strategic communication planning process to support the situation analysis (e.g., share of voice), strategy definition (e.g., stakeholder and touchpoint analyses), implementation (e.g., real time advertising) and measurement (e.g., real-time reporting).

Feedback loops and data exploration

Big data analyses are usually not a linear but an *iterative process*. That means that certain steps (data collection, data analyses etc.) might have to be repeated several times until the results are in line with the demanded goals. These feedback loops help to improve the analysis process.

Furthermore, big data applications should also leave enough room for *unguided exploration* to discover hidden relations or trends. Experts prefer a hybrid-approach: analyzing big data with precise goals in mind AND sparing time and budget for experimental data analyses.

What do you need?

✓ **IT infrastructure:** Corporations should set up a transparent data infrastructure that is accessible for all business units. Experts describe a data laboratory with a data lake as ideal. Here internal as well as external data that is close to raw format is stored for future analyses.

✓ **Organizational set-up:** Big data applications require a close and more flexible collaboration across departments and disciplines, i.e., in small sub teams. Setting up a central Command Center for social media applications can help to bundle data, expertise and knowledge.

✓ **Competencies:** The lack of analytical and technical skills combined with a lack of time to study big data are the main obstacles. Not only should communication managers be open to new technologies, but also universities and corporations should implement big data trainings.

✓ **Regulations:** It is vital to follow national data protections regulations. In addition, ethical guidelines would be helpful to legitimize big data applications and enhance public trust.

About the research project

This is one of many applied results of the research program "Value Creating Communication" initiated by the Academic Society. Professor Ulrike Röttger and Dr Christian Wiencierz (University of Münster) researched the potentials, prerequisites and applications of big data for the field of corporate communications. They interviewed 34 big data experts and outlined best practices from Bosch and the OTTO Group.

📖 **Read more**

Communication Insights:
- Wohin geht die Reise? (Issue 2, 2016)
- Startklar für Big Data (Issue 4, 2017)

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