

HR and Big Data: the future of HR is more and more data-driven

Why is employee data analysis becoming a priority for HR departments in companies of all industries and sizes?

Big Data is now a key element in all major business sectors. The spread of digitization has led to an exponential growth in the data available to companies. This amount of data represents a strategic opportunity to support decision-making processes in different business areas, including **HR management**. Read also "[How and why to connect your LMS to the HR management system](#)"

Just as it is fundamental to track consumers' journey in order to understand their behaviour and anticipate their needs, it is equally important to understand in a scientific way what influences the behaviour of company staff: how do employees behave? What can be improved to encourage **employee involvement** and/or increase their productivity?

To answer these questions, Human Resources today cannot do without data in any of their areas of operation: recruitment, performance measurement, employee welfare and training, etc. In fact, data analysis can help companies understand which candidates to hire, who is receiving adequate compensation or how to improve the retention of their internal resources.

Data-based HR management improves the quality of decisions and helps drive performance. This is because it allows to better understand how production processes work, workers' performance, and to predict future behaviour (retention rate, absenteeism, etc.).

How to get value from employee data?

To get the most out of the data, however, it is necessary to move from pure reporting (a posteriori evaluation of company data) to forecasting future events. The real potential of the analytical approach, in fact, is to **derive value from data** by translating the numbers into insight and then into business and behavioral improvement strategies, and this is possible only by exploiting the three different **levels of data analysis**:

- **Descriptive analysis**, which answers the question "what happened?" and serves to represent, also graphically, a reality. This type of analysis is useful to learn from events that have already happened.
- **Predictive analysis**, which answers the question "what could happen in the future?" and serves to examine the data to make predictions and trace possible future developments.
- **Prescriptive analysis**, which answers the question "how should we respond to potential future events?" and provides strategic guidance and operational solutions to manage decision-making processes.

All this requires a strong cultural change for companies, which will inevitably have to:

- Define how to **collect and consult data** (integrating them, where possible, with sources from other business systems or external channels, such as social media);
- **Develop the skills** necessary for data management and analysis by introducing, if necessary, specific professional figures;
- **Introduce technologies** that allow the development of predictive algorithms and the dynamic and customizable visualization of data.

HR Analytics: success stories

Although in Italy the use of data in HR is still limited and mainly related to descriptive reporting, the international panorama shows several success stories.

Google: the use of data for managerial development

In 2008 **Google** launched Project Oxygen, a study aimed at identifying the main characteristics of its best performing managers. Having identified the eight most appreciated qualities, it has incorporated them into its management development programs, improving results in terms of **performance, turnover and employee satisfaction**.

IBM: using data to retain talent

IBM used data analysis to reduce turnover which, in some roles, had reached critical numbers. Through the "Proactive Retention" program, the company analyzed a series of data including position, title, promotions and employee salaries to calculate their **probability of leaving the company**. According to CEO Ginni Rometty in an interview with CNBC, thanks to the data analysis the company is able to predict with an accuracy of 95 percent which employees are going to leave their jobs. Not bad, right?