



ABSENTEEISM INSIGHTS REINVENTED

- a 3 level deep dive with data analytics -

*Big data. HR analytics. Machine Learning. Predictive Modelling. And Artificial Intelligence being the new kid on the block. Most CEOs of larger companies have these buzzwords on their agenda. Surprisingly, it is hardly used on the largest cost and most important asset, **people**! According to a Deloitte study 66% of CEO's have recruiting the right staff defined as a top priority. This makes managing absenteeism more relevant than ever.*

At Workmetrics we apply data analytics to workforce related topics. In this paper we focus on Absenteeism and demonstrate how using a 3-level data analytics approach we generate insights enabling you to select the interventions that will be most effective for reducing absenteeism in your company. This paper includes two short videos that explain and demonstrate how this works.

How we see absenteeism & data analytics

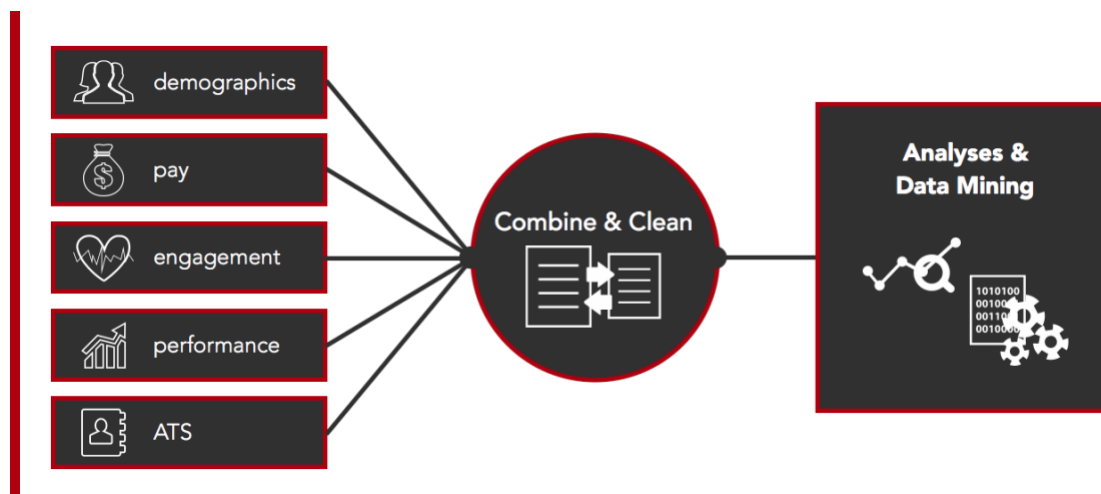
Taking the issue of absenteeism, it is our experience that most organizations merely use the very rudimentary data which is directly available from their absenteeism system. Data which is typically provided by their internal or external occupational health service provider. At best, these reports include absenteeism rates, differentiated by demographics and benchmarking figures for organizational units. This is limited and static approach which does not deliver the insights management needs to decide what interventions must be put in action for an effective reduction of absenteeism.

At Workmetrics we take a more sophisticated and comprehensive approach. We combine *multiple* data sources - already present in your organization - and apply state-of-the-art data analytics techniques, combined with modern management science. This way we can create more adequate performance indicators and provide much better insights for management.

LEVEL 1

Interactive Absenteeism Dashboard (“Identify”)

Workmetrics combines data from different, often segregated, data sources into one dataset. In the case of absenteeism, we combine absenteeism data and the data kept in the salary system and the personnel information system.



The approach consists of two steps. First, we calculate the total costs of absenteeism, being the sum of all direct and indirect costs, such as salary cost, replacement costs, opportunity loss, reintegration costs, and the cost of occupational health services.

Secondly, Workmetrics generates an interactive dashboard for you, dedicated to - in this case - absenteeism. These dashboard can be deployed using software like Tableau or Microsoft Power BI.

The dashboards enable you to ‘*slice and dice*’ the data to any demographic set of criteria you might think is appropriate for your journey to identify the “hot spots” of absenteeism within your company. With these insights you determine appropriate interventions to cut off ‘the top’ of your absenteeism.



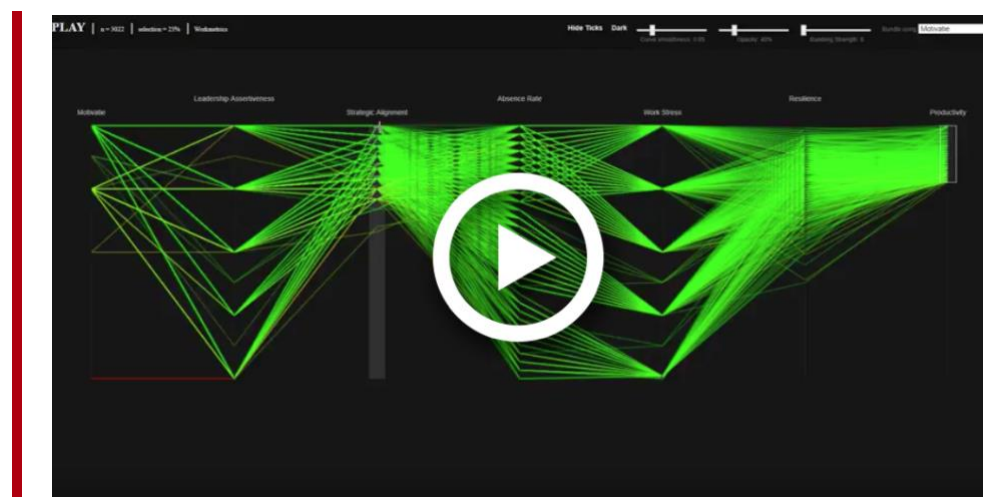
Click on the video [or on this link](#) and take a look at this 5 minutes video, explaining how our dashboards this works.

LEVEL 2

Simulation Analytics for a deeper understanding of Absenteeism (“Prioritize”)

In the video above, you have seen that with our smart, intelligent dashboards you can do a lot of analyses yourself. Now we will dive into the next level Simulation Analytics for a deeper understanding. A 3 minutes video will demonstrate this in action.

The first step is expanding the absenteeism dataset with additional data sources, such as the results of employee surveys, creating a richer set of variables. Next, we can test different scenarios and the impact of specific variables. This generates a more enriched understanding of the challenges at hand. You are now able to prioritize the set of interventions according to impact, thus reducing absenteeism at the most effective and cost-efficient manner.



LEVEL 3

Predictive Analytics on Absenteeism – (“Predict”)

A more advanced application of data analytics is predicting and forecasting. There are several predictive techniques that all have specific requirements to the quality and the quantity of the available datasets.

One of the applications can be a classification model. We have built such a model for absenteeism and tested it with a result of 73% accuracy – which is a lot more accurate than the average human. By applying machine learning techniques, we can even improve the 73%. THR staff can compare the features of individual employees and groups of employees with the classification model and determine which support package is most effective to prevent and reduce absenteeism. Individualized tailored support is much more effective compared to generic absenteeism intervention policies.

Summary

Identifying the most critical areas of absenteeism and its related costs is the scope of Level 1 - Smart Dashboards. At Level 2 we identify using simulations the impact of specific variables thus reducing the set of interventions by ranking them on impact and cost. We concluded our deep dive at level 3 by applying predictive analytics to add value to the effectiveness of absenteeism policies, both with respect to prevention as well as reduction.

At Workmetrics we also apply the framework described in this paper to other workforce risks, such as attrition and recruitment. Together with you and your team we can align our solutions with your focus and configure the techniques and software in such a way that they generate the insights you need to make data-driven workforce decisions.



Performance
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Interactive
Dashboards



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