Advancing Human Resources to the AI Age: Overcoming the Challenges and Realizing the Potential of **People Analytics** Together

People Analytics – what's behind the buzz?

People Analytics can help HR unlock the power of employee data. Driven by enormous advances in Big Data and AI, the interest in the area has grown exponentially. We help organizations capture the value associated with People Analytics through innovation projects that target the essence behind the buzz.

Meaning. Based on an extensive structured review of the field, we define **People Analytics as the use of data analytics techniques at all stages of the employee lifecycle.** It can be descriptive (what happened), predictive (what will happen), and prescriptive (what should be done) in nature and involves a mix of simple and advanced analytical methods (e.g., visualization in dashboards combined with statistics, machine learning, and other AI methods).

Value. People Analytics is not an end in itself. It requires the combined view of business and data experts to develop the most value-adding use cases. For example, organizations that structurally integrate People Analytics in their talent acquisition and development efforts are observed to increase their recruiting efficiency by up to 80% and overall business productivity by up to 25% (McKinsey, 2023).

What does state-of-the-art look like for People Analytics both in practice and research?

Organizations at the forefront of People Analytics go far beyond traditional reporting and generate real-time, forward-looking, action-suggesting insights.

Practice examples. Such approaches include but are not limited to predicting turnover/intentions to leave (e.g., Credit Suisse), designing individualized learning journeys (e.g., Zurich Group), conducting data-based performance evaluations (e.g., Novartis), or live-monitoring employee attitudes during a crisis (e.g., Unilever). Successful applications have a clear link to business value and rely on the integration of data from different systems. Analyses are automated wherever possible, so that HR experts can focus more on value-adding activities. Particularly, they are enabled to work with analytics to be advisors to managers and facilitate a culture of data-driven decision-making.

Open questions. People analytics algorithms are constantly developed further with regards to functionality and computational efficiency. At the same time, to profit from this advance, **companies need to address increasingly pressing organizational challenges**:

- where should organizations start and how could they make the leap to advanced methods while minimizing the cost for setting up data systems?
- which skillset is needed for HR managers to efficiently work with People Analytics systems and be advisors to management?
- how can the link to business value, data privacy, and unbiased, ethical decision-making be ensured when People Analytics is applied at scale?

What could a collaboration look like and why would the IBA be the right partner for it?

To address the above and potential further issues that are most important to your organization, we propose to move forward together.

Our way of working. We apply a practice-oriented, so-called design-science process. It comprises the development of concrete solutions ("artifacts"), which can be both technological (e.g., a digital platform) and organizational (e.g., a newly defined skill matrix).

1 – Use Cases	2 – Prototyp	3 – Showcase
Identification	Development	Roll-out & evaluation

Prior to each project, the scope and extent of the cooperation is tailored to the organizational context and the issue in focus. Then first, a high-potential use case is identified based on joint workshops. Second, a prototype usable in everyday practice is designed (MVP). Third, a rigorous scientific evaluation is performed before an implementation plan is developed. This way, **we ensure that our work has both high academic quality and practical relevance.**

Our experience. Over the last years, we have collaborated with numerous public- and private-sector organizations, such as:

- Bertelsmann Stiftung: data-based identification of relevant future skills
- Steinbeis: personalization of upskilling programs
- German Federal Statistical Office: fostering ability to use analytics systems through Explainable AI

The Institute of Business Analytics (IBA)

We are part of the University of Ulm and carry out interdisciplinary research in the field of Information Systems, i.e., at the inter-section of business management and mathematics/computer science. We conduct **high-quality scientific research in collaboration with practice partners from different industries** and are close to the data analytics start-up scene.

We would be excited to be in touch with you, discuss potential areas for cooperation and design a study set-up that suits your needs.

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