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People Analytics

Improving HR Processes with Advanced Analytics and Big Data

INSIGHTS&DATA

The key is to apply new insights from big data and analytics to your HR processes.

Capgemini and IBM® have developed an innovative HR solution, based on IBM Watson and BigInsights, to support companies of all sizes in the optimal management of challenges like recruitment, internal mobility, and career development. The key is to apply new insights from big data and analytics to your HR processes. Natural language processing, machine learning, predictive analytics, and data visualization all combine to enable this approach. With it, you can match people better to requirements, streamline HR processes, save time, and reduce costs.

Why HR processes need advanced analytics

HR departments need to optimize the way their organizations use human resources, and to be as efficient as possible themselves. They need to make better and faster decisions, to match people better to requirements, and at the same time to reduce costs.

As an HR director, you're probably aware that you could achieve your aims more effectively through better use of data. For example, when a business need arises, you need to be able to see at a glance whether you have the right person available internally or need to look outside. In the latter case, you then typically face the additional challenge of scanning large volumes of applications or CVs/résumés.

Fortunately, with today's technology, it's possible to automate much of the work of matching people to requirements. You can also bring together structured and unstructured data to learn more about the potential of your own staff, and take advantage of information available in social networks to find out about potential recruits.

With recent advances, all this can be achieved without major investment in technology and related skills. Applying advanced analytics effectively to HR challenges is the aim of our new offer, People Analytics.

Tackling HR challenges with big data technology

The People Analytics solution from Capgemini and IBM helps you meet challenges like these, using recent, affordable technology for big data analytics.

For example, you can:

- **Identify the right person to fill a need, either internally or externally:** Match the requirement with your internal databases and, if necessary, with professional social networks
- **Decide how best to assign an employee who has become available:** Match the CV with the needs descriptions stored in your databases
- **Spot people outside the company who could be worth recruiting:** Match social network profiles detected by the system to internal needs identified, and trigger the recruitment process if there is a match
- **Identify and nurture individuals with high potential:** Discover the path typically associated with successful senior staff and find junior employees who are currently on that path – then suggest training and development to help them realize their full potential
- **Recommend training and development** for each employee based on the difference between the skills you currently have and those you expect to need, as well as the specific employee's background.

How it works

Techniques we use include:

- **Contextualized text analytics:** analyzing text (without any need to assign keywords) and contextualizing the data in the sense that candidates and requirements are matched, in terms of geography and travel time, as well as their area of specialization and professional skills
- **Machine learning:** improving matching algorithms by observing user behavior and processing feedback (with artificial neural networks and so on)
- **Predictive analysis:** forecasting how staffing plans need to change when the company faces organizational change or restructuring; anticipating market trends and developing employee skills accordingly
- **Visualization:** gaining a 360° view of skills in the company.

Data we can process to gain insights includes CVs/résumés, job descriptions, training and education descriptions, profiles of past assignments, career paths in the company, business repositories, and annual appraisal/interview notes. The data can be both unstructured and structured, and both quantitative and qualitative.

Technologies used include Big R text analytics, Big SQL, and IBM's Hadoop for Enterprise, BigInsights, which provides storage and processing engines. Data visualization and extended text analytics are handled by IBM Watson Explorer.

Figure 1. Architecture and Component Requirements
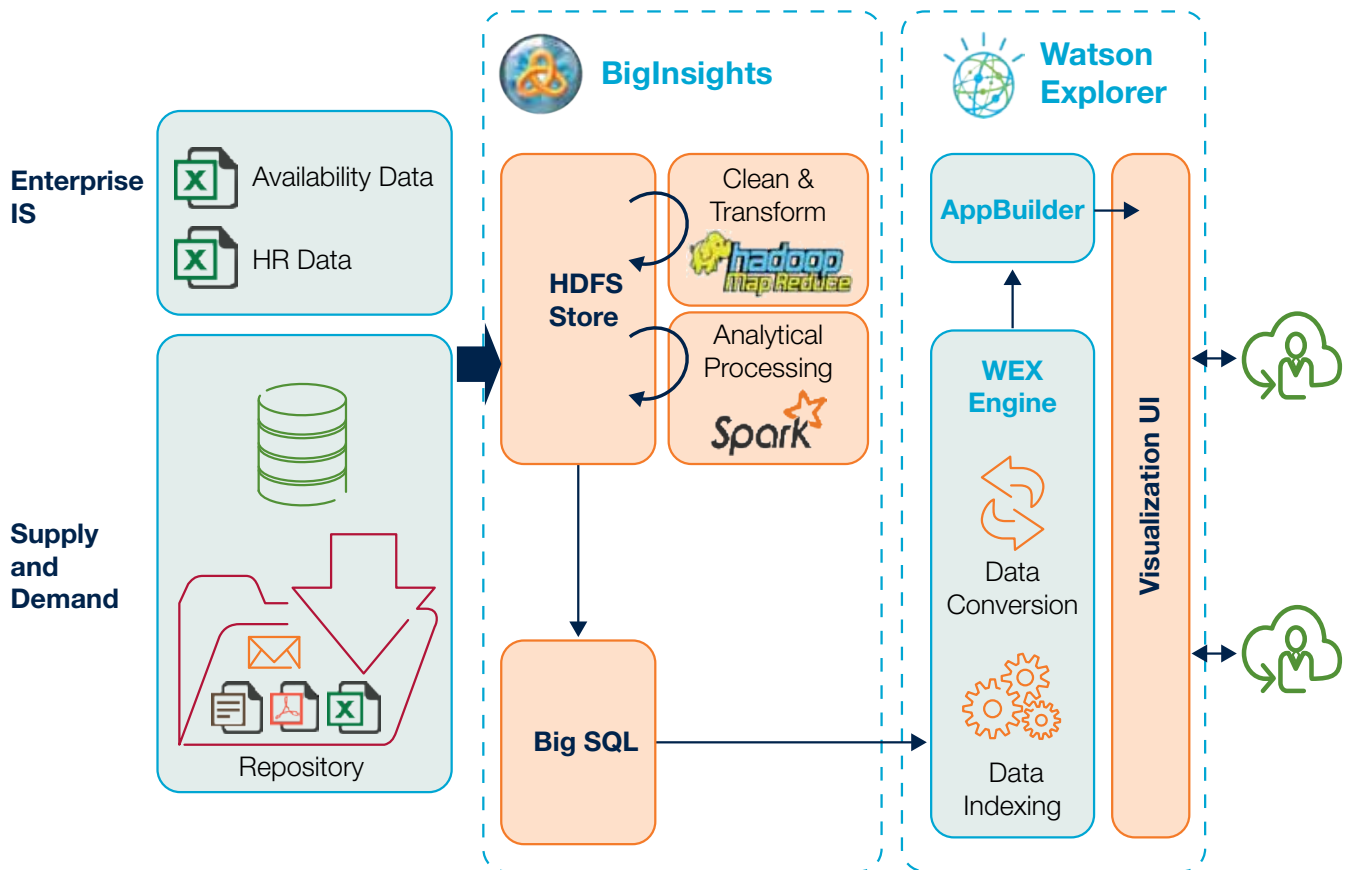
Benefits

When you need to resource a requirement, our People Analytics solution can instantly scan hundreds of CVs and match them to a requirement, identifying the right person for each job, and vice versa. As a result, you can:

- Manage employees' career paths and internal mobility more effectively and in real time
- Gain a 360° view of the skills available to you
- Identify and recruit valuable resources that become available on the market before your competitors do.

More generally, the solution enables you to:

- Streamline many HR processes through automation and the availability of better insights
- Save time and effort spent searching, processing and matching information, with consequent cost reductions
- Avoid human bias in interpreting data because the process is fully automated.

Find out more

Contact us today to learn more about People Analytics and how it could help your HR function add more value to your business.

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Capgemini Insights & Data

In a world of connected people and connected things, organizations need a better view of what's happening on the outside and a faster view of what's happening on the inside. Data must be the foundation of every decision, but more data simply creates more questions. With over 11,000 professionals across 40 countries, Capgemini's Insights & Data global practice can help you find the answers, by combining technology excellence, data science and business expertise. Together we leverage the new data landscape to create deep insights where it matters most - at the point of action.

About Capgemini

Now with 180,000 people in over 40 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services. The Group reported 2014 global revenues of EUR 10.573 billion. Together with its clients, Capgemini creates and delivers business, technology and digital solutions that fit their needs, enabling them to achieve innovation and competitiveness. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.

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People matter, results count.