

## Six ways technology is changing HR

**The pandemic has accelerated the application of new technologies to managing workforces, as human resources departments prepare us for the future of work. Here are six technology-based trends transforming HR management for Industry 4.0, dubbed HR 4.0.**



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New technologies are helping to transform how companies manage their workforces, giving rise to what's known as Human Resources 4.0. So, how is digitalization transforming the management of people now, and what can we expect looking ahead 10 years into the future?

To address this big question, Philip Muller and [Joan Fontrodona](#), holder of the [CaixaBank Chair](#)

[of Sustainability and Social Impact](#), have produced a report tracking trends in technology and human resources, looking at the future of work (in Spanish: [Tecnología y recursos humanos. Una mirada al futuro del trabajo](#)).

According to the authors of the 2022 report, here are the six most significant areas of transformation taking advantage of new technologies for tomorrow's HR management:

**1. Hybrid and smart working models.** The pandemic has shown that it's possible to fulfill many work obligations without going into the usual place of work. The challenge for HR is to prepare, execute and ensure compliance with a teleworking policy that's in line with regulatory requirements, company objectives, and the legitimate interests of each worker or group of workers. A key point here is that HR should show flexibility and sensitivity to particular situations instead of applying a one-size-fits-all approach.

**2. Cloud-based services and tools.** Companies must be able to operate from anywhere, and their employees need to get work done from wherever they are. Having a cloud-based platform that brings together HR services and tools provides advantages at three levels: 1) for the organization, it is more efficient, saving time and reducing bureaucracy; 2) for HR professionals, it facilitates hiring, onboarding and training, while helping to generate and collect productivity data for each employee; and 3) for employees, it facilitates direct access to useful information -- such as payroll, benefits, vacation days, results and an organizational chart of the company -- from wherever they may be working.

**3. Workers' wellbeing.** Technologies that provide data about employees can be used to improve their wellbeing in two directions: from the outside in and from the inside out. From the outside in (centripetal management), the nature of the work itself can be restructured according to the information obtained. Also, workers can be trained to deal with stressful situations on the job with new technologies, such as virtual reality, and with applications that help master distractions and promote mindfulness. From the inside moving out (centrifugal management), data on wellbeing generated by employees -- i.e., when they truly feel satisfied and fulfilled in their work -- can be posted to job search portals, social networks and the corporate website in order to attract more talent.

**4. Virtual reality, augmented reality and gamification projects.** These can facilitate onboarding, as well as employee training and professional development. In addition to VR's purely educational purposes (for example, training pilots or customer service reps), its applications can also facilitate remote contact between employees and create virtual office spaces. In terms of augmented reality -- that is, adding digital information to real world

objects -- its use in the world of work is promising, but as yet underexplored. Regarding gamification apps, a good example can be seen at Microsoft: its Language Quality Game (LQG) gets employees around the world involved in a web-based collective effort to find and fix translation errors among its offerings.

**5. Artificial intelligence and people analytics.** AI has the possibility of offering HR fast and convincing résumé scanning, though its potential biases need to be addressed. AI can also help reduce employee turnover rates by indicating which workers are most likely to be considering leaving after analyzing their online behavior, social media updates, employment history and other data. Meanwhile, a chatbot can help with onboarding by providing contract details, who's who in the company, and other information regarding the dynamics of a department and/or a specific position.

**6. Privacy-enhancing technology and cybersecurity.** Privacy-enhancing technology (PET) enables data to be shared without violating anyone's individual privacy. In addition to utilizing PET as appropriate in data collection, HR should periodically review their privacy and data-use policies in order to weed out any ethical shortcomings or regulatory risks. At the same time, the security of companies' interconnected systems and devices must adapt to the new reality of working from anywhere. As such, policies should consider users and their devices, rather than the traditional office and its network.

At the end of the day, the authors conclude that the correct use of the aforementioned technologies -- far from replacing human beings or even questioning their importance -- should facilitate HR management and prepare us all for the future of work.

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