



Redesigning Human Resource Management System through Cloud Computing: A Strategic Approach

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ABSTRACT

Cloud computing is enabling human resource (HR) management functions to strategically integrate into business operations. Its acting as a game changer for HR amid intense competition to survive and grow. Digital disruption, transformation, agility has set the new benchmarks for organizations to automate and redesign their functions. Cloud Computing offers HR a completely new dimension with cloud centric benefits like reduction in communication gap, increased organizational excellence, effective talent strategies, data driven decision making, and supporting revenue in organizations. Cloud Computing has the right capability to redesign major HR functions with agility to match the changing requirements of business, automating transactional activities, smarter decision making and meeting the business expectations. Use of HR cloud in organization can result into structural benefits beyond technological advancements. Cloud HR gives organizations flexibility of location, prompt information processing, effective use of data analytics and strategic decision making. This paper discusses ways through which cloud computing could be integrated into HR functions. An analysis on applications of cloud computing in human resource areas with their outcomes is also presented in this paper. A brief note on future prospects of cloud computing in HRM is also discussed.

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1. Introduction

Whether technology should be seen as process enabler or growth-catalyst or new-age foundation of the future business arena is still being discussed and a myriad spectrum of views along with counter views by industry and academia are trying to figure out the answers, cutting edge technological advancements like cloud computing envisioning a whole array of business probabilities has made the holy grail of business and technology more complicated while throwing gamut of challenges and opportunities alike. Human Resources or HR as they say, has also lapped up this technological advancement of concept of cloud computing inheriting its advantages for augmenting business processes with ever-increasing digitization of its process spectrum.

Cloud technology has been a game changer for many organizations by revolutionize the way they used to do their businesses. The big impact of cloud computing is the ability to reduce the hardware and software cost by providing a shared pool of resources like hardware, software, networking devices and applications etc by reducing the cost and enhancing the performance of the businesses. A cloud-based system allows organizations to scale up their IT resources based on their requirements thus saving infrastructure cost, maintenance cost, quick collaboration and effective management. It is a Pay as you

Use Model where organizations are supposed to pay for only the services they used on the cloud.

Just like other business functions, human resource management and its technological integration with other systems of the organization has become the need of the hour. Every organization is finding out ways through which they can reinvent their Human resource management processes. A Cloud based HR system can reinvent and transform the traditional HR with its HR software ability to enhance performance of the employees by maintaining high quality people engagement. For HR professional's centralization of information is the focal point for every decision making. With the help of cloud computing HR process are more strategic in nature, efficient and productive to its employees. All these results are successful in giving a high impact and boast to HR processes. A couple of advantages of using Cloud based HR Management is listed below.

- Flexibility

Agility and flexibility are the real advantages of cloud computing. Organizations at their will can easily scale up and scale down the resources requirements on the cloud based on their business usage and expansion. Operational agility is the most preferred cloud advantage which organisations are banking on. Lots of paperwork in HR

is eliminated with the usage and mobility component is added. There is always instant access to the information despite of being away from the location.

- Cost Effectiveness

The key differentiator of cloud computing technology is its cost effectiveness. Unlike many other software upgradations and packages which are available in the market requiring a lot of resources and infrastructure for their implementation cloud computing is a saviour. It does not come at the expense of higher cost and resources and therefore smaller organizations can also compete with bigger organization in terms of better employee management, recruitment and retention strategies.

- Innovation

The biggest advantage of cloud computing is that organizations need not to invest in buying new software for their process rather they can use the shared resources on the cloud on continuous basis and can pay only the usage fee. The ease in sharing and implementing the required software helps the HR to manage their process like payroll management, recruitment, talent management and so on effectively. The cost for using these cloud-based software's is much less than the traditional software packages. Even small to medium size organizations can reap the benefits of cloud computing and can stay updated with the technology.

- Cloud Computing and Internet of things (IOT) in HR

Cloud computing in collaboration with IOT can yield numerous benefits for HR practitioners. IOT can help in sharing enormous amount of data related to employees and their related processes resulting into prompt decision making, sharing opinions, experiences and making working environment more flexible and stress free.

- Talent Acquisition

A cloud-based recruitment process can strongly eliminate the pitfalls of traditional recruitments procedures. Decisions based on the perception, prejudice, poor information and miscommunication can be completely replaced by integrating the technology component into decision making. Usage of algorithms (profiling of job applicants), and data analytic metrics like cost per hire, time to fill, internal hiring ratio, offer acceptance ratio and many other can bridge the gap by eliminating the missing links in the talent acquisition process.

2. Objectives

1. To study the importance of cloud computing in human resource management applications.
2. To analyse the strategies followed by different organizations to implement cloud computing in their human resource management functions.

3. Review of Literature

Mukherjee *et al.*, (2012) in their study discussed the application of web-based portal for human resource management. They included cloud HR management services for personal information management, employee self-services, benefits, leaves and salary management. Small enterprises could also be benefited with the use of cloud computing for all above listed benefits. Web based portals provides quality and economic perspective of Cloud HR in their paper.

Othman *et al.*, (2017) identified the importance of iHRMS for real time attendance tracking of employees. iHRMS benefits are not only limited to control absenteeism but effective payroll management and data management could be done with the help of software. In their study researcher designed a prototype modelling for cloud HR to track the attendance of employees. The model provides exemplary view of systematic data management on cloud HR for attendance and payroll management.

Bhadani R, (2014) highlighted the importance of cloud computing in HR issues like data privacy, security and management could be easily solved with implementation of cloud computing. The paper explained the selection of Cloud HR models on different platforms. An overview on challenges and opportunities for cloud computing and HRM was also discussed. Advantages like pay for use, global accessibility, cost effectiveness were also identified.

Kumar R, (2017) studied the use of HRMS software for effective management of HRM in organizations. In their article they explained the use of different types of clouds platforms for HR applications. IaaS is the most basic type of cloud software used for information management. PaaS is the next level used for upgradation of HR functions including recruitment and selection, learning management etc. on online platforms. SaaS is the most interactive technology platform used by HR to automate all their processes and easy accessibility to information.

4. HR Cloud Computing in Practice: A Strategic View on Different Organizations

4.1 Twitter

After the craze for twitter spread all over the world, the internet colossus was fed up with the manual data entries for all the HR practices in the company. The ADP (Automatic Data Processing) HR systems has become the excruciating for the widening internet giant as per the organization. The international data was on a lost track as most of the data entry was manual. Running all the processes on spreadsheets was neither productive nor scalable. So, after a few years twitter turned towards cloud. Twitter by the end of 2012 started using Workday's human capital management cloud services as it helped in integrating multiple systems together. Applications, integrations, data

and security all are managed at the same platform as one powerful system. After the implementation of cloud HR practices, the data access and sharing have to another level of improvements. Having analytics with global data sets has been really impactful for Twitter. This system has given HR practices more credibility as it has lead to reduced costs and employee innovation plus they have been efficiently able to show their client groups insights into data which was not possible earlier. Hence, HR Cloud practices proved to be a business booster for Twitter.

4.2 Hewlett Packard

Hewlett Packard wanted a single platform to harmonize its business processes spread across 175 countries and manage HR systems performance globally. After HP deployed the Workday's cloud HR, the service assistance tickets saw a huge drop in numbers. The analytical abilities of the Workday's cloud HR systems was a big advantage HP was looking up to while deploying it. They observed an ease in closing deals with clients as they were able to show staff allocations and other reports spontaneously to the clients as they became easier to pull off. HR cloud provided them relational data in mere seconds which earlier took months. While talking about the HP's employees' promotions, the transactions which were needed to calculate it, earlier took forty-five minutes on HP's legacy system and after cloud it took only 1 minute to do the same task as per Spradley, the HR representative of HP.

4.3 Equifax

Equifax, likewise Twitter, wanted to move the HR processes to cloud because of its internationalization features such as language support. Equifax with over 7500 employees and 5000 contractors in 18 countries before moving to cloud had to individually operate all those 18 branches with ultimately had a limited visibility into corporate data. The local HR managers used to manually enter the data into spreadsheets and this limited the views of managers for different branches. Access controls were a mess as per Bause, international HR support for Equifax. After the deployment of the cloud HR system the company was able to access all the information at a single platform and explained the system to be fantastic. The HR managers could now access all the data on compensation, performance, management structure and demographics on a master spreadsheet. The need for better support for ongoing merger and acquisition activities was also fulfilled by Cloud HR. Consolidating personnel and financial records and systems after an acquisition took months of work on the old system. After the deployment cloud software in 2012, they shifted the operations for 380 new employees on the system which took 3 days but now the employees had a self-service tool on which they just needed to sign up for monitoring the benefits and direct deposits and input their emergency contacts information. The Workday's

cloud software provided a social media-like platform which helped them in increasing the informal communication as well. This informal communication between the authorities and the managers helped them to have better response from the managers. As HR is all about humans, this system made the managers feel like "a part of the family" and hence a productivity and employee innovation booster with increased employee retention.

4.4 Julius Baer Swiss Pvt Bank

Julius Baer is a leading Swiss Pvt Bank which has completely transformed its HR functions into cloud HR solutions. Before 2017 the bank relied on outdated HCM software for most its HR backend functions. There were different problems associated with HCM like limited number of access to employees about HR functions, relying on third party for its recruitment solutions, complex systems and incomplete data support. The HR team was able to convince Julius Baer board for Workday cloud HR due to its certain advantages over its competitors like single platform operations, lesser maintenance cost and running cost. Within few months the bank was able to access the cloud benefits as every location in which bank operates was able to access the same HR functionalities, there was transparency in employees data, the bank was able to meet its compliance's and audit requirements and so on. Further the extension of cloud was supported by third party solutions in the form of apps for customized requirements. With the successful implementation of HR cloud, the organization was able to save half of the HR IT costs and the savings turned into \$1m a year.

A list of some of the top Cloud HR systems for an organization are presented below:

- BAMBOO HR

BambooHR is the #1 online HR framework for little and medium-sized organizations. Our cloud-based framework offers incorporated candidate following (ATS), onboarding devices, e-marks, time-off following, and execution the executives, with simple revealing and an advantageous versatile application for representatives. BambooHR liberates HR from the information the executives winding to turn out to be increasingly compelling, progressively proficient, and progressively human.

- CEIPAL

CEIPAL Workforce is an across the board, cloud-based workforce the executives framework intended to streamline HR and worker the executives. Work Force is a solitary, coordinated stage for Human Resource Managers to direct labourer documentation, timesheets, leaves, and costs just as operational expense, investigation, and more. A representative self-administration entry empowers your workers to determine questions rapidly and autonomously just as view records and submit demands.

- ADP Vantage HCM

Cloud-based HCM stage that empowers organizations of all sizes to oversee finance, participation, benefits alongside other HR administrations.

- Zen HR

Cloud-based Human Resources Management System intended to computerize participation following, finance estimation, move programs, and the sky is the limit from there.

5. Integration of Cloud Computing in HR Functions

Cloud computing offers HR department a holistic view where they can streamline all HR functions, data management, data security and global employee's data into one integrated function as cloud. Data related to recruitment, employee engagement, training and retention of employees could be kept on cloud and every one can access that data resulting into faster decision making and less chaos. Similarly, HR data can be aligned with organizational data for strategic decision-making including functions as HR planning, promotions and retention of employees further resulting into happier workplace and higher productivity. Organizations with HR integrated cloud system can stay ahead of their competitors using technology trends which are easy to implement on these platforms. Cloud HR is certainly a benefit for organizations in managing their complex function, maintaining data security, scalable operation and data driven predictive and intelligent decision making. An integration of cloud computing and human resource management functions is shown below in Figure 1.

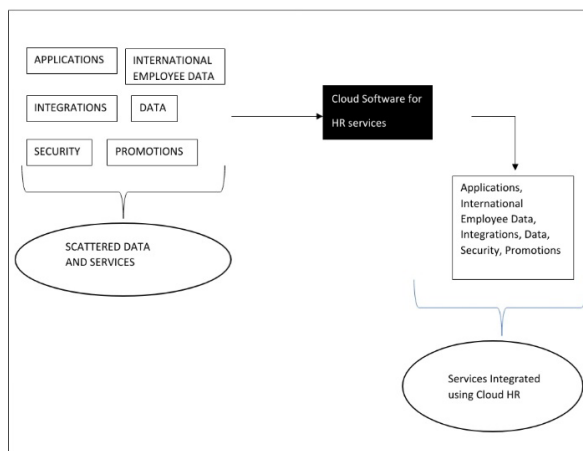


Figure 1: Integration of Cloud Computing with HR Functions

Source: Formulated by author based on the literature

6. Future Prospects of Cloud Computing and Human Resource Management

Advancements within the field of HR technical are crucial in shaping however talent management processes have evolved. HR professionals across the world will these days tinker with established practices, modifying them to satisfy their company's varied talent demands. This has been greatly enabled by HR technical evolution that these days has catered to a growing demand at intervals HR professionals to own higher suggests that of interacting with their worker base and improve their productivity.

Such an increase in HR technical has been spurred partly because of rising business interest in talent practices. The unpredictability of external business surroundings combined with a revived 'war on talent' has created corporations additional cognizant of its talent management practices. Business leaders across the board have explicit however relevant having the proper folks in their company has become to make sure their corporations will weather the changes, each internal and external and facilitate businesses stay profitable.

A glance at three major areas wherever HR technical shifts are to require place:

- Hiring to become more holistic and data-driven

The enrolment work as of late has developed to turn into an imperative part of how HR experts look to address their organization's ability needs. Getting the correct contracts has gotten basic with the expense of an off-base contract today being essentially high. This has implied HR experts have progressively looked towards the better utilization of HR technical to improve the exactness of their contracts. With variables, for example, up-and-comer experience, manager brand, and vital sourcing all turning out to be pertinent today, HR technical arrangements today have made organizations enormously focused in drawing in and employing the correct ability.

While enormous scale employing crosswise over divisions like retail and IT can be computerized today to fit leaving profiles, even specific aptitude-based procuring today influences HR tech in type of utilizing enlarged investigation to look and hotspot for the correct ability. Man-made intelligence-based enrolment today is effectively helping selection representatives handle huge numbers of their oblivious inclinations accordingly empowering HR experts to make a progressively assorted workforce. Many sourcing devices today assist enrolment specialists with taking advantage of the developing gig economy to discover authoritative business answers for their ability needs.

- The rise of 'people' augmented analytics

As far back as prescient investigation become effective in utilizing enormous information examination to foresee

shopper practices, organizations have started trying different things with different verticals which may profit by a comparable utilization of investigation. Things being what they are, it was the HR work that would before long be tossed into the spotlight to guarantee the organization can employ and hold significant ability. Today, such applications have developed from simple examination of representative information to a framework which feeds HR activities and makes them more information driven. With a bit of leeway inside most HR capacities being their capacity to produce and gather worker information, it regularly turns into a fruitful playing field to utilize prescient examination and use them to settle on better representative choices.

Pushing forward, the expansion on AI and AI over the prescient examination space makes certain to take into account better and progressively all-encompassing bits of knowledge into driving ability development and enable HR experts to settle on better choices on the most proficient method to send their workforce towards tending to organization needs more adequately. This has applications crosswise over HR works today. From making execution the board increasingly successful in guaranteeing worker commitment activities are compelling in driving profitability, all profit by prescient investigation. Foreseeing learning and preparing needs can likewise demonstrate critical in helping organizations manage future changes. Its future application makes certain to make HR rehearses increasingly effective and help accumulate significant outcomes that can demonstrate pivotal with regards to being proactive in managing ability issues.

- Reinventing wellbeing

A key some portion of ability development today has gone into empowering a progressively solid and beneficial workforce. Throughout the years the centre has moved from simply regarding workers as similarly as a necessary chore to concentrating on all-encompassing prosperity for their representatives.

With progressions into authoritative brain research impacting HR works on, prosperity has advanced to incorporate acts of care and dealing with psychological wellness not with standing physical. Today the ascent of corporate prosperity is caught with its rising size of the market, around \$48 Bn in size. It ranges from diet and wellness; care and emotional well-being. With rising instances of worker burnout, organizations would before long need to start utilizing HR techniques to move the concentration from essentially moderating representative medicinal services expenses to a general wellbeing approach that proactively assists representatives with managing burnout and deal with themselves over the long haul. Pushing forward, HR techniques would

empower HR experts to be progressively key and rebuild prosperity to enable their workers to stay solid in an increasingly all-encompassing nature.

Yet, the ascent in the utilization of mechanization, prescient investigation, AI, and advanced stages, alongside reinforcing HR activities, today likewise open the entryways for inefficient execution. To realize how to utilize HR tech productively and adequately, it's critical to know how it can remain to change to existing HR intercessions.

7. Conclusions

Cloud computing has already proved its benefits to different organizations by improving their human resource processes. The initial hitch and fear or unawareness of cloud computing in HR can easily be overshadowed by the excellent results of using the cloud. In the near future more and more organizations will be moving towards completely digitized platforms where technology will be the core of decision making for every process including HR. Cloud computing offers massive advantage to organizations by reducing their cost, less dependency on their internal infrastructure and resources, better communication, enhanced flexibility and completely agile workplace.

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