10ᵗʰ Edition

Chapter 21 Digital Human Resource Management

Abstract: This chapter examines key advancements in information technology and digital human resource management. It examines the need for computerised HR systems. Beyond the traditional computerised systems, the chapter examines advancements in cloud-based systems and focuses on key constructs such as social media, the gamification of HR elements, and online approaches to talent, performance and training. It introduces the reader to concepts such as the internet of things and its effects on HR practices and focuses the reader's attention on the ever-increasing dangers of cyber-risk due to over-reliance on technology. Finally, it examines the implications of both artificial intelligence and robotics to some of the key functions of human resource management in hospitality. An expert interview and the case study enable readers to utilise a critical and analytical mind in deciding on the balance between online and offline HRM.

Introduction

Hospitality management is characterized by an immediacy and an endless cycle of everyday activities and events. It requires a keen sense of the priorities and

challenges of the immediate future in order for production and service to come together in a simultaneous offering to the customer. It is about managing resources in the short term, but also demands managers and staff to ensure resources to be properly planned for the future. It is all too easy to pay full attention and energy to today's events and to allow tomorrow's and longer-term business to come as a nasty surprise. And in the 21st century, the business environment is subject to such swiftly changing consumer trends and technological developments, that hospitality managers cannot afford to believe that the future is assured and their 'tried and tested' formula for hospitality operational management will always be successful.

The employment relationship can also be dominated by the 'here and now', ensuring that there is effective workforce and management action and cooperation, that the underpinning HR systems of recruitment and payroll are fulfilling the need of the operation and that employment is administered and enacted within the prevailing legislation. However, the development of contemporary HRM has also placed more strategic, long-term emphasis on the need for organizations to plan and prepare for the future of the business. The alignment of HRM and future business planning requires that the HR decisions are based on appropriate and relevant data, just as any strategic plan, rather than be left to happenstance and external pressures alone. This chapter considers HRM and employment in the hospitality industry within the digital age, the way that modern digital technology can assist HRM operations and business processes by embracing the technologies of contemporary society, specialist computerized

personnel information systems (CPIS) and the readily available provision of data that give direction and justification for actions.

Embracing technology

The hospitality industry has always been concerned with technological developments that help to create a more effective and efficient internal operation. That meant ensuring that the operational areas of the business were supported by the most modern and appropriate equipment; from ovens and ventilation systems to computerised reservations and reception systems; from ergonomically designed bars and restaurants to 'smart' in-room televisions on which the guest can check their bill and even check-out. However, today's society and the digital age requires a more outward and external perspective on technology and the way such advances are utilised.

Consumers behave differently, researching their future purchases at home on their laptops and tablets by reviewing websites, social media platforms, comparison websites, other consumers' reviews and views and so on. Hospitality firms need to be aware of these consumer behaviours trends and be organised sufficiently to forge their customer relationships via the internet, via a range of platforms and apps., building loyalty whenever possible. The consumer has more choice, and hospitality needs to learn from the experience of many high street retail stores, the many failures and closures in 2018 often caused in part by a lack of presence in terms of online ordering and delivery. To inform a decision on where to stay for a few days' break, a potential guest will often search the websites

of hotels, of booking agencies, of self-catering accommodation, of homestays and Airbnb, and then the interactive travel sites and past customer review sites.

In HRM, hospitality managers need to be cognizant of the choice also available to existing and potential staff. The means by which people seek employment is subject to the same digital technology for research as with the customer; job boards, agency websites, social media platforms, company websites and even staff review sites such as 'Glassdoor', all ready to influence decisions on where to apply, where to seek training and development and career opportunities. As referred to in the chapters on employer branding (Chapter 7) and recruitment (Chapter 6), the digital age means considering how you develop your brand for employment and the external labour market as much as for the consumer. And the digital age also presents management with more data, more rationale and information on which to base decisions and future plans, both strategic and operational.

The need for information

At the strategic and operational HR planning levels, management needs accurate data, information and statistics in order to develop long-term strategies and in due course to implement shorter-term plans. This can be illustrated by a real example with which one of the authors of this book was associated. A brewery and pub company reviewed its business strategy and this resulted in a strategic driver or imperative to expand its number of managed licensed retail houses by 100. It needed to recruit at least 100 new management teams (often husband-and-wife

teams or partner couples) to run these public houses. In addition, as it had 100 managed houses already, it would have to anticipate finding replacements for some of these existing 100 managers. If wastage (labour turnover) rates of pub managers had been unavailable, it would not have been possible to calculate accurately the numbers to recruit and train. On the other hand, the company had kept records and these showed that wastage among established managers was 20 per cent per annum and among trainees 30 per cent. It was then simple to determine how many to recruit in a year.

Since 100 managers were required for new houses and 20 managers were required for existing houses, this indicated that a total of 120 managers were needed to complete the training programme. However, as wastage during training was around 30 per cent, the number to be recruited had to be increased to compensate for this loss. The brewery, therefore, knew on the basis of past experience that it would need to recruit about 172 managers to fill 120 vacancies likely to occur. The actual phasing of this recruitment depended on other factors such as the length of training and the availability of new premises. This illustrates that plans for the future are difficult to implement effectively without adequate records and statistics. However, as was said much earlier, the individual's needs, as well as the employer's, have to be recognized – consequently, any records and statistical data must serve the individual as well as the employer.

Information and statistics/records on the workforce may be required for a range of purposes in both day-to-day operations and as a foundation for future HR and corporate planning connected to that workforce:

- to provide detailed operational information such as monthly establishment and payroll analyses

- to provide ratios or data such as wastage and turnover rates, age profiles and other demographic characteristics

- to provide information on individuals for administration purposes such as salaries and pensions (all within the limits and precepts of data protection legislation)

- to provide basic data for succession planning purposes and career development plans

- to provide statutory information such as national insurance, tax details, minimum wage records and implications, working time regulations, statutory payments and redundancy payments if appropriate

- to provide the basis for references and re-employment purposes

- to provide information for disciplinary, grievance procedures and possible future employment litigation reasons.

The format and level of sophistication of the information system will very much depend on the size and scale of the organization. Small, private firms may decide to keep paper human resources records of such fundamental aspects as a personal file or personal dossier; proformas connected with employment and appointment; disciplinary, grievance and termination forms; establishment and labour turnover analyses; payroll data; accident and medical reports; absentee records. However, with the benefit of modern computerized personnel information systems (CPIS),

even small businesses can be reassured that for a relatively small cost for a very basic system, they have an information base that both protects them from legal processes and provides a basis for operational planning. Technology can provide solutions but it can also come at a cost. HR functions are affecting peoples lives in the organisation and their emotional commitment in more ways some managers understand. Technological interventions in HR systems If correctly planned can yield numerous benefits. Overreliance on computerised systems without the human element in key moments of processes can have disastrous results.

Computerized personnel information systems (CPIS)

For hospitality organizations such as multi-site and multinational chains, with large and disparate workforces, there is now a wide range of software systems that can be acquired. Some systems are basic IT versions of the personnel record systems of the past and can be purchased from as little as £500, but for multinationals, much more sophisticated designs need to be considered, and the cost-benefit factor assessed. Advanced CPIS provide stores of data, providing the necessary and essential information required for both short-term, everyday management needs and also the basis for longer-term strategic HR planning. Human resources software packages aim to provide the employer with all the necessary data in one, secure location. A basic system can store:

- personal details

- holiday records

- absences/sick leave

- payroll records

- disciplinary records

- working patterns/shifts/rosters

- performance and training data

- Exit interview records

- legislative/statutory and required data.

With regard to this last point, these packages have the inherent advantage of giving the employer some peace of mind over compliance with employment law and regulations. Regardless of size, an employer is required by law to retain and maintain accurate basic details of employees of all levels and status, from full-time to part-time and casuals, as well as details of other subcontractors and volunteers. Systems will normally ensure there is adequate provision for the systematic keeping of records connected with legislation such as work permits and visas, right-to-work forms and the Disclosure and Barring Service (DBS), the UK government employment checks to enable safe recruitment decisions to be made. The DBS system was the result of bringing together the CRB (Criminal Records Bureau) checks and ISA (Independent Safeguarding Authority). Some CPIS also have the facility to generate written statements of employment for new employees within two months of their start dates and also flag up renewal dates for important legal

The employment relationship & Digital Human Resource management

issues such as the DBS security checks where supervision of children is involved.

Other, more sophisticated systems might include the following features:

- full HR software for personnel database management for comprehensive, safely stored employee records

- payroll software with full integration of payroll with the HR information above, reporting needs and statutory forms

- online recruitment facility with full vacancy management features from applicant management (applicant tracking) to uploading of CVs by the candidate (sometimes referred to as career portals, allowing firms to access the same tools as used by commercial recruitment agencies)

- training solutions for managing courses: scheduling, budget and course documentation

- work patterns and effective performance analyses, for most efficient approaches to work shifts and ergonomics/design of work patterns and rotas

- analysis features which can be customized to the needs of the employer, perhaps producing charts and graphs required for presentations as well as management interpretation of the analyses prior to taking relevant action

- links to social media platforms and guidance on how to use them for collaboration and connections across different parts of the company, to

improve communication and engagement of personnel across a multi-site organization

- 'HR Dashboards' can be part of some systems, providing analysis and metrics on-screen, segmenting the workforce data into different formats as required by management, e.g. payroll summaries, salary costs, overtime trends, sector benchmarks against which to judge HR performance trends and achievements.

Auditing HR

As with the HR Dashboard concept noted above, some of the largest employers also conduct detailed studies periodically which provide comprehensive analytical and statistical breakdown of their workforce, from job grades and salary bands to age profile and lengths of service. There may be a requirement to review staff training activities, qualifications levels, performance assessments and appraisal data. Put together, such information may provide a dossier of data to underpin and inform an HR planning function. It may also be useful to try to determine the economic value of the human organization by placing values on all activities, such as recruitment and training, and in effect preparing a human resource account. This approach, sometimes referred to as human asset accounting or human capital management, can be relevant if the HR team wish to find a correlation between business success and profitability and to demonstrate the value of the input from HR activities. In the contemporary approach to HR management and practices, the HRM team need to be ready to advertise their

The employment relationship & Digital Human Resource management

worth as much as a Food and Beverage Manager announcing their excellent gross profit margins and customer service ratings.

However, it is a difficult and challenging task to discover and calculate absolute correlations between HR inputs and business success outputs. Contemporary management strategists, especially in the hospitality and related service sectors, do not always need the hard evidence of values to convince them that their human resources are key to commercial viability; or that planning, both strategically and operationally, is an integral and essential part of managing a hospitality enterprise in the twenty-first century. Wherever possible though, HR teams should do their utmost to set measurable objectives of their activities, e.g. training courses and programmes, and use the CPIS to generate relevant data and trends of data.

Box Start

Mini case study: Robot Restaurants Inc.

The Robot Restaurants Inc. was an award-winning chain of restaurants in New York that specialised in integrating high-end technology to the customer experience. Their approach to good quality food and simple recipes combined with memorable robotic innovations gained them a considerable market segment in a very short time. This enabled them to expand relatively fast to neighbouring cities. By their 5th year of operations they opened their first restaurant in Europe and within three years they owned or managed over 350 restaurants. Their

meteoric expansion in distant geographical locations brought a number of problems from product quality assurance to rethinking their HR strategies. As technology was at the heart of their operations and part of their Unique Selling Point, the Senior Management decided to turn their people management to a holistic technological solution. An HR consultancy firm that specialised in advanced technological solutions was brought in. They automated every function of HR and heavily utilised artificial intelligence and Big data analytics to inform key decisions. One strategic decision was that everyone from junior management and bellow would be recruited by a fully automated A.I assisted system. Fog computing enabled them to make key recruitment and development decision at headquarters in New York and instantly apply their decisions through their advanced A.I HR system. This approach not only reduced recruitment and induction costs by 60% but it also allowed for an unprecedented speeding up of the recruitment process. One important piece of information was that although the HR consultancy were experts in the utilisation of computer technology RRI was their very first hospitality client.

Staff turnover in the restaurants varied from country to country but it was at best 60% per annum and at worst in some European sites at 95%. Within months of the AI, system implementation staff turnover doubled across all sites and the biggest problem was with junior managers with over 80% of them resigning within 3 months of starting their role. Automated exit interview systems were yielding little data because employees that were leaving did not wish to spend time talking to a computer for a company they had little emotional investment in. Within a year the company began showing the greatest deficits they had ever seen

in all their years of operation. Both customer and staff dissatisfaction had risen to an all-time high and the company started shutting outlets at an alarming rate. Customer feedback pointed towards staff morale and lack of training or in some cases inappropriate behaviour by employees.   RRI had found its self in a downward spiral of self-destruction. By their 8th year of operations they had lost almost half of their restaurant "fleet" and customer satisfaction was showing no improvement.   By their 10th year, the company went bankrupt and Robot Restaurants was no more. Industry experts still wonder, was Robot Restaurants simply a fad or was it bad strategic management that ultimately caused their demise?

Box End

Social media and HRM

Social media has revolutionised most management functions and that is also true in the case of human resource management. Facebook, LinkedIn and Youtube still retain their rightful place as the big three social media platforms.   However new entrants in the market are taking over large segments of the market, especially in connection with the millennials, those reaching young adulthood in the early 21st century. HR professionals are utilising social media to their advantage for recruitment, communication and training purposes (see Ladkin and Buhalis, 2016). LinkedIn is a platform that lends itself for recruitment purposes simply because it acts not only as an online curriculum vitae but it allows an HR

professional to utilise keywords and search with ease for the right kind of candidate for the job. Coupled with readily available recommendations on a user's profile, this platform enables easy early screening of candidates at a level that was never possible before. Platforms such as Facebook, Twitter and Instagram are often utilised by HR to help screen a potential candidate (see Evuleocha and Ugbah 2018), and there have been extreme cases where a personal misconduct on social media has led to the dismissal of an employee from a company. Social media also render themselves as great platforms for internal communication although this functionality is taken over by mobile apps such as Whatsapp or Viber. Internal communication plays a vital role in maintaining staff morale so having the ability to communicate operational changes or share news throughout the organisation is an immensely powerful tool.

Training can also be achieved through the use of social media. Not having to travel to different sites to deliver training programmes has great financial benefits. Training sessions can be developed and customised for the needs of a specific unit or even a specific individual. The utilisation of social media for the deployment of training Units cannot, however, be seen as a panacea for training. Effective training would require a strategy of blended methods so that organisations can achieve a balance between efficiency, cost-effectiveness, employee engagement and satisfaction.

HR professionals increasingly utilise social media for professional recognition and sharing best practice amongst peers. Platforms such as Twitter can be utilised for emergency notification amongst colleagues. Finally, another great function of social media is it can be a highly effective reward system. Praising employees in

an open forum if used effectively, can help motivate not only the employee that was praised but also motivate the rest of the workforce by establishing the positive online word of mouth and reinforcing employee brand commitments.

Big Data and HRM

Trend analysis of large chunks of data can provide insightful information for any part of a business and human resource management is not exempt. Big Data may be defined as the computation of very large datasets, in order to reveal trends, patterns, interactions, correlations and behaviours so that management may take appropriate action. HR professionals are often under pressure to provide more analytics and Big Data enables cost-effective organisation of recruitment activities (Bara et al, 2016). However, in some cases, Big Data analysis has done nothing more but validate conventional wisdom. For example, Google's project 'Oxygen' has proved that often common sense knowledge stands true even after Big data analysis. For those not familiar with Project Oxygen, Google hired a number of statisticians to evaluate data in the hope that they could prove that manager quality did not have an impact on performance. However Big data analysis revealed the opposite and something that has been known in the world of hospitality for many years, great managers do motivate and impact performance. So in this particular case, Big Data validating a known fact may be seen as a waste of resources but can also be seen as a positive way of checking that trends have not changed and that different generations still react in a similar way at a fundamental level.

In order to enable and facilitate Big Data analysis, an organisation will need to ensure that all its HR databases sit in the same place. Unfortunately, that is not always the case and often the recruitment database, the training tracking database and the exit interview database may sit in three different platforms making a holistic approach to Big Data analysis extremely hard. Although traditionalists may argue that there simply isn't enough data points in HR for Big Data to be useful enough, the utilisation of social media platforms by employees and organisations has changed this dramatically. An organisation can audit Big Data and develop early alert systems to ensure that staff remain motivated, engaged and committed to the organisation's brand. Big Data blurs the lines between useful utilisation of employee information and legal boundaries and in both simplistic and complex organisations navigating those legal implications can be extremely challenging. However, Big Data analysis is simply a tool and like any tool, it needs to be utilised appropriately and without forgetting all the necessary ethical considerations.

Gamification in HRM

Gamification has been extensively used as a way of engaging customers in order to gain their loyalty and increase sales. Essentially the process of gamification (game thinking and game mechanics) applies behaviour motivational techniques from traditional game models to non-game situations. The very same principles that have been utilised in consumer contexts are increasingly adopted by human resource professionals. Marriot Hotels was an early adopter of gamification, back

in 2011 they developed "Mymarriothotel" a game on Facebook that allows gamers to take on the role of a hospitality manager. With a simple game, Marriott can achieve two goals; a) fill in job positions b) generate employee brand loyalty.

Motivating employees to participate in training sessions utilising social media gaming (such as cryptic puzzles) enables companies to train their employees and engage them in new and profound ways.

Another example of gamification in hospitality is that of 1Huddle. This is a company that was launched in 2015, it enables training through the use of mobile gaming. Loews Hotels. & Co. was one of the very first clients of this platform that enables training via mobile device gamification.

Hilton hotels are currently featuring on various games including Roblox, a mobile app that hosts games that enable you to have a virtual training at Hilton, 'work' at a Hilton online property, even be interviewed for a Hilton job. The games not only create brand awareness but can also motivate younger generations to seek a career in hospitality and the chances are that Hilton may be a beneficiary of such new talent.

Cloud-based HRM and e-talent, e-training, e-performance

In the *Global Human Capital* report by Deloitte (2016), it is reported that HRM has advanced in employee culture awareness, employee engagement, the use of analytics and the adoption of cloud-based technology. It highlights that HR has moved away from the traditionalist mentality of simply being a service provider

and many HR departments are now seen as talent and employee experience consultants that foster an innovative approach as to how they do business.

The key advantages of having a cloud-based HRM system include:

* Flexibility: cloud-based services make allowances for different and fluctuating business demands. A large organisation may pay for larger bandwidth whilst a small business can pay for only the bandwidth they need. Similarly, a large organisation that may shrink due to an economic crisis or have a large expansion can easily adapt its bandwidth purchase without the need for expensive hardware. The process of adjusting is also much more expedient.

* Critical failure recovery: small businesses are notorious for forgetting to back up their data often resulting in unrecoverable critical failure. A cloud-based system automatically backs up and enables businesses of any size to recover their HR data in the event of system failure.

* Automatic software updates: the traditional legacy computerised systems of HR can often stay behind of the latest updates. A cloud system offers automated updates and often the pricing includes this, making it affordable and time-efficient for any size of an organisation.

* Reduced start-up expenditure: cloud computing, subscription-based models eliminate the need to purchase computing equipment that would normally be needed for the storage and implementation of traditional HR systems.

The employment relationship & Digital Human Resource management

* Multi-site benefits: flexibility for collaboration amongst departments and working from anywhere in the world is yet another advantage of cloud computing. For a multi-site organisation, such as many international hospitality companies, sharing information across hotels, restaurants or departments is vital and cloud computing facilitates this at a new level. Most cloud systems would now be supported with relevant mobile apps and cross-functionality amongst all key computer operating systems

* Data and file control: the more employees collaborate on documents, the greater the need for good solid document control. With a traditional system, employees have to send files back and forth as email attachments to be worked on by one user at a time. This can at best create confusions over file content or format and at worst allow a leak of data outside the company.

* Sustainability: a cloud system may reduce the use of paper although there is a debate about the disadvantages of large servers to the environment.

The disadvantages of cloud-based HRM systems include:

* Security risk: having all data held centrally and accessible from anywhere on the planet does leave an organisation open to cyber attacks or viruses.

* Privacy and security: breaches of personal data become more possible with cloud computing.

* Downtime: although servers have become far more reliable it is still the case that servers will have to be taken down for maintenance or in the worst situation, due to a server failure.

It is important to understand that we are fast moving into an advanced stage of technological innovation. Cloud computing may soon be a thing of the past as we already are talking about FOG computing. Where with Cloud computing we were talking about storing data online, Fog computing (a term attributed to Cisco) extends cloud computing providing a closer proximity to end users and bigger geographical distribution.

E-talent management

We may define e-talent management as the digital process that helps anticipate the required human capital for an organisation and the planning to meet those needs. The benefits of an e-talent system versus a traditional approach are very much captured in the benefits of a cloud-based system as noted above, but e-talent is more than just using a cloud computing system, it is a strategic approach of adopting social media platforms and mobile applications that enable an organisation to connect and share data. E-talent facilitates an easier early integration of talent into an organisation and improves the employee experience from the very early stages of integration.

E-Training

E-training may be defined as the utilisation of blended learning methods, supported by digital platforms in order to train skills, to coach and support the learning of employees in an organisation. E-training focuses on the utilisation of both gamification and traditional processes that enable an employee to develop their skills and knowledge within the organisation. Linking this to Big Data, an HR professional can easily see what programmes work best for different types of employees and adjust the content or style of delivery accordingly. Finally keeping data on each employee enables management to receive automated alerts for gaps in training and support the employee before there is an unfortunate incident, such as a customer service failure or an accident to the employee.

E-Performance

We define e-performance as a continuous digitally supported process of communication between managers and employees that help accomplish the strategic goals of the organisation, whilst at the same time ensuring that engagement and motivation of the employee are maximised. Employee online profiles enable managers to interact with their employees knowing the employees' professional progression at the touch of a button. Performance can be measured and best practise benchmarks can be utilised as reward catalysts leading to increased employee and manager engagement.

HRM and the Internet of Things

Smart devices, smart meters, commercial security systems and wearables such as smartwatches are just some examples of devices that gather and share data on the

net. Collectively they have become known as The Internet of Things (IoT). But what are the connections between IoT and HRM?

IoT is increasingly becoming integral to the lives of people and HRM is all about dealing with people. If employees are wearing wearable devices that allow data from the workplace to be gathered and analysed any number of key functions could be redesigned for the benefit of both the organisation and the employee. For example, imagine a housekeeping department that wasted time and energy in the way rooms are allocated to housekeepers. One housekeeper may have to travel to numerous floors to clean her allocated number of rooms, this could have gone unnoticed before but with IoT, such patterns could be easily identifiable. A bad design of operations in one country could be fixed by an intervention from the Headquarters based in another country simply because IoT provided the data that enables senior managers to make better decisions or affect decisions on the "floor".

Both the emotional and physical health of employees is important yet not many organisations understand the state of their employee's health. Too often the reporting mechanisms add too much red tape that the communication mechanism itself becomes the inhibitor for communication. With IoT employees with wearable devices such as smartwatches could send alerts to bosses when either the emotional or physical state of the employee is beyond the specified parameters. Not every manager has advanced emotional intelligence that would allow them to sense that an employee is not well and should be given a break. IoT correctly utilised could enable supervisors and managers to better manage the wellbeing of their employees.

IoT facilitates better people analytics and people analytics can help companies deliver better employee experience from recruitment to development. But like everything else, it also has its drawbacks and security breaches and absence of ethical codes of conduct can be two of the biggest drawbacks for an organisation. Strohmeier (2018) predicts that IoT will change the technology utilised in HR systems (both software and hardware), will affect HR activities in new ways and will change tasks and qualifications for HR professionals.

Cyber risk and digital HRM

The naïve organisation may think that cybersecurity is only the responsibility of the employer and that training on cybersecurity is not necessary for all employees. However, with the adoption of digital HRM practices, the need to rethink cybersecurity for the protection of both the organisation's data and the employee's data becomes of paramount importance.

Cyber thieves are most likely to attack the weakest link within an organisation so it is very important that organisations implement training programmes that enable employees to also take personal responsibility for cybersecurity. It is also important that the organisation adopts security measures that not only comply fully with the legal requirements but are also both practical and ethical. Social media has made it even easier for cyber attackers to target an employee who may

be dissatisfied with an employer so having systems that easily identify employees who may be of a particular risk to the organisation is a priority issue.

Recent cyber attack victims in the hospitality industry include Radisson Blue hotel group, Intercontinental Hotels Group, and Huazhu Hotels, all of which suffered a considerable breach of data due to cyber attacks in 2018.

Finally with the increase of cyber attacks an organisation may consider the hiring of a consultant that will act as an "ethical hacker" in order to test their systems for possible vulnerabilities. It is HR's responsibility to decide the terms of engagement such as hiring and termination dates, non-disclosure agreements and communication protocols with such consultants.

Digital HRM Robotics and Artificial Intelligence (AI)

The latest Deloitte Human Capital trends report (2018) confirms that both robotics and AI are affecting the future of HR professionals, as noted in other sections of this book, such as Recruitment (Chapter 6) and in various aspects of Part 3, the section on contemporary issues in HRM and hospitality. Face-recognition software has been utilised for some years and is now more advanced than ever, in that it can recognise gender and age, distinguishes between speaker moods, analyses video interviews and auto-decides on anything from educational level to evidence of a candidate lying about their resume / CV. From coaching managers to suggesting career options, automated analytics tools are already showing evidence of intelligence beyond that expected from a robot. In the same

way that gamification began with the customer in mind, so has the talk about AI in hospitality focused on the effects on the consumer. However, with ever-shifting generational cultures, the AI discussion is slowly finding its way into the realm of human resource management.

Box Start

Interview Extract: Hospitality technology expert on AI and Hospitality

Dr Pantelidis, what is the big deal with artificial intelligence?

Machine learning and artificial intelligence (AI) have been part of our daily lives for years (I see machine learning as the method that gets programs to AI) even though most of us fail to recognise their presence. You may have had an AI experience either through online banking functions or through your smartphone functionalities. AI scientists have been pushing the boundaries for decades yet consumers tend to only realise it when it's too obvious. It may be obvious when we interact with services such as Siri or Google-help, but believe it or not machine learning and to some extent, AI has been used in hotel websites for much longer than you imagine.

But what has changed that makes AI more relevant for hotels/hospitality industry?

I believe two things have changed that make AI more meaningful for hotels. One cross-brand sharing of Big Data analysis in Hotels and two, high profile projects led by companies such as Google and Deepmind. From self-driving cars to AI-assisted medical diagnosis, our world is changing rapidly.

And how does that change affect hotels/hospitality organisations?

Well at this stage of the evolution of AI, hotel companies are rapidly evolving their methods with Big Data consumer behaviour analysis! But it is not just the methods that are evolving. I believe our industry is also evolving and CEO's realise that sharing data across brands is much better as the collective synergies yield a multitude of benefits both for the hotel brands and their internal and external consumers.

Yes but how exactly does it do that?

Imagine a real-time big data analyst who can identify trends in an instant. This can easily lead to better market segmentation! An AI system can categorise and group markets in ways that we never thought possible before (mainly because of the prohibitive costs of the analysis and data storage). AI can also help with swifter and better personalisation of the customer experience. Imagine companies gaining a new understanding of the wants and needs of their customers; they could produce customised services and products just for that customer; from how you like your eggs in the morning to what newspaper you like to read, to a personalised summary of the news from various newspapers and much more!

And that is just for external customers. For internal customers hotels can gather data on meaningful interventions of the associate/employee to the customer experience and AI can analyse this and help associates improve through external motivation (bonuses) or personalised training! The possibilities really are endless.

Can you see only positive things with AI development?

AI is just a tool, and like any tool, it can be used both for good or for harm. We need hospitality companies to start developing codes of ethical and responsible behaviour. Governments have already attempted to establish parameters, the European general data protection regulations (GDPR) may be a headache now for companies but ultimately it is laws such as this one that will help minimise the risks of unethical data-mining and aggressive selling behaviour. Despite these laws, I believe the companies themselves should have an ethical compass that helps them moderate their developments because laws can only take you so far and there are plenty of cases where bending the law has "broken a customers heart"!

What may be the implications for HRM?

Machine learning is already affecting the interview process and recruitment, from chatbots at the early selection stage to AI facilitated video interviewing, ensuring that future employees get the 'illusion' of a personalised journey from the very beginning. Sending an application only to never hear back from a company will soon be a thing of the past, personalised chatbots will be able to deliver customised feedback to any and all applicants no matter how bad the application. This can create a positive organisational brand that attracts even more talent for the innovative organisation that will be an early adopter of such technology.

Any advice on how hospitality managers and HR managers can learn more?

The best way to learn is by getting involved! Begin with understanding machine learning. Google has some great examples to help lay people understand the basics. Partner with technology companies and help them understand the context of hospitality so that they can, in turn, build better intelligent systems for hospitality organisations. Of course, not all technology companies are sympathetic to their customer needs so you 'll need to find one with whom you can speak the same language. The most important thing for any Hospitality CEO or HRM professional is to keep themselves updated with the latest developments and yes sometimes that means reading not just industry news but also academic papers. With open access papers, this is becoming increasingly easier not just for hoteliers but anyone with a thirst for knowledge.

Pretty soon we shall see the hotel and other hospitality organisations evolving as thinking systems that work with their associates to deliver both amazing service and great returns to all stakeholders; now that would be the intelligent hotel of the future I would love to stay at!

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Box End

Both robotics and artificial intelligence are being adopted at an unprecedented pace compared with any previous technology development in hospitality organisations. Whether you are working for a traditional hospitality organisation or a technologically progressive one, understanding the importance of these two

technologies for the current human resource professional is extremely important as it will directly impact on how your employees perceive the organisation. An informed choice of absenteeism from advanced technologies is not a bad thing but a strategic decision based on ignorance is.

Further reading and references

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Box Start

Questions

1 What purposes can be served by computerised information systems (CPIS) in connection to HR planning and HR operations?

2 If deciding to purchase a CPIS software package for HR data, what criteria would you assess in order to make a worthwhile purchase?

3. What impact do you think the range of digital technology solutions reviewed in this chapter, e.g. AI, Big Data, will have upon the hospitality sector?

4 What aspects and HR performance measures would you want as part of the data analysis on an 'HR Dashboard'? Consider an organization with which you are familiar as a context for answering this question.

Box End

Case Study Question – see the Robot Restaurants Inc case study

What were the key strategic questions that may have had an impact on staff satisfaction?

Why is it important to retain a human element to staff recruitment and induction?

The employment relationship & Digital Human Resource management

What should/could R.R.I have done to avert bankruptcy?

Does culture affect the adoption of technological solutions in HR? And if yes how do you think tech and culture affected the RRI expansion plans?

What would be the ideal digital system for RRI if money and time was no issue?

The expert interview talks about codes of ethical and responsible behaviour do you think that RRI followed such a code? If not should they?