USING SERIOUS GAMES TO RECRUIT, INTEGRATE AND TRAIN YOUR EMPLOYEES:
AN EXPLORATORY STUDY OF PRACTICES

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Abstract
Serious games are used in various sectors, including car industry, defense, aeronautics, pharmaceuticals, healthcare, banking, and media. They seem to have reinvigorated and expanded the field of corporate simulations. Different from e-learning tolls, they are relying on new information and communications technologies; they have borrowed from the universe of video games to offer players/learners a new kind of experience. Much more than a simple fashion, serious games have become ubiquitous in the field of recruitment, ranging from the integration of new employees to interactive training, benchmarking and institutional communications. Serious games have had a major effect on human resource management in the companies that use them, and their generalization augurs some major and lasting changes in this function. The present text aims to study several cases of serious games and demonstrate the different ways in which these games are used as well as their impact on individual and collective performance and on human resource management practices. The article will pursue a prospective approach that also gives consideration to potential developments affecting these gaming-educational platforms and the corporate roles they can be expected to fulfill in the future.

Keywords: Serious games, human resource management, recruiting, collaboration, training.

Introduction
Joseph Chilton Pearce wrote that, "Play is the only way the highest intelligence of humankind can unfold" (Pearce, 1993). Organisations may appreciate the higher intelligence produced through gaming but most refuse to acknowledge this openly and many view the prospect with disdain. Games are equated with entertainment and therefore not taken seriously by manages who generally refuse to accept their usefulness. In this view, games are vulgar and futile whereas management is noble and attends to important issues. Yet serious games are already being used by most multinationals (and more than half of all companies listed on the CAC40 stock index of leading French companies). Born in the United States during the 1990s and having grown ever since in sectors such as health care or aeronautics, games enable new modes of recruitment, training, evaluation and management based on virtualization and enhanced reality.

Role-playing games are often criticized, especially in their mass online multi-player form, for imprisoning young persons in a virtual reality where they escape from real life. It is true that in certain extreme cases, teenagers spend so much time gaming that they stop sleeping and studying. Yet above and beyond the social malaise manifested through some Internet users' cyber-addictions, the pathological vision of online games should not be generalised. The growth of serious games highlights a change in managers' vision of video gaming practices, which are no longer perceived as a form of alienation and pathology but as a way of stimulating young talents' creativity and competitiveness, making training

programmes more attractive and immersive and communicating more effectively about sensitive subjects that may otherwise be difficult to treat holistically.

With nearly one billion people in the world playing at least occasionally, serious games are geared towards a population that is relatively familiar with online gaming - particularly Generation Y, which is very used to gaming and the leading consumer of training and coaching. At the same time, serious games have been designed to be accessible to as many as possible. Many people have benefited from this democratisation of video games, a recent phenomenon that has touched all generations and social classes thanks to new approaches such as FarmVille on Facebook or Dr Kawashima's Brain Training or WiiFit on Nintendo Wii. Teenagers no longer dominate the world of gaming, which has been able to attract new audiences by means of new devices that can be categorised in different ways.

Like traditional games, serious games offer scenarios that encourage players to move from one stage to another by overcoming any challenges they meet and improving their scores and levels. The widespread use of avatars, which serve as players' digital doppelgängers, encourages involvement and interaction. Serious games' design combines competencies held by game designers, developers, infographic specialists, scenario writers, community managers, trainers, business experts and human resource directors. All have helped to develop a tool that is entertaining, at the cutting edge of current technologies and corresponds to specific objectives that are relevant to a company's different businesses, global strategy and human resource management modes. It generally takes between one and two years to develop a serious game.

Once the present article has defined and categorised serious games, its first section starts by trying to enhance understanding of their impact on human resource management practices. The second section then presents the origins and definition of serious games' different forms and uses, describing how such tools are employed to recruit and integrate employees, enhance training and benchmarking, encourage internal collaboration and disseminate corporate values. The third section is devoted to exploratory methodology based on exploration and observation. The fourth section describes serious games' impact on recruitment practices, training, integration, observation and telecommunications in the human resource function. Finally, after signaling the dangers and limitations associated with serious games, the conclusion summarizes the lessons that might be drawn from this research work.

Serious games: playful work or professional game

Research and publications on serious games remain few and far between given the novelty and relative immaturity of these objects. However, some publications specialising in how to educate and train people to use video games did begin to appear in 2010 in places such as the International Journal of Gaming and Computer-Mediated Simulations (IJGCMS), or in 2011 in the International Journal of Game-Based Learning. Note that the term "serious games" covers a wide variety of realities, meaning that confusion reigns in this domain. Hence the need to clarify what we mean by serious games while offering a more precise definition of their role and how they affect human resource management.

Back in 1968, Clark C. Abt wrote a book entitled "Serious Game" where he presented his research findings and explained how games constitute a training method that helps to develop industrial projects' management competencies, diffuse marketing messages, disseminate corporate cultures and familiarise people with business processes. The scientific community does not have one single definition for serious games. This would be relatively difficult to establish given the way that this term varies depending on the actors or countries involved. A consensus exists that these are games used for something other than entertainment, but they are often confused with e-learning software or virtual environments.

E-learning is an interactive teaching tool that generally relies on a number of different media modes featuring written and visual support devices such as commented slide shows,

audio or video recordings and tests or checks on people's acquisition of knowledge. Note that some virtual reality games such as Second Life are not the same thing as serious games due to their lack of rules, objectives, modes, levels and competition, or the fact that they do not try to construct knowledge that would be useful in the real world (Derryberry, 2007). Without "learning goals" and an educational dimension, some games are little more than simulations.

There are many terms referring to serious games, attesting both to the diversity of the actors involved and the range of approaches followed. "Educational games, Simulation, Virtual Reality, Alternative Purpose Games, Edutainment, Digital Game-Based Learning, Immersive Learning Simulations, Social Impact games, Persuasive games, Games for Change, Games for Good, Synthetic Learning Environments, Games with an Agenda…" (Alvarez and Djaouti, 2010). These terms exemplify the diversity of perspectives regarding objects that are both similar and different in their structures and uses (Sawyer and Smith, 2008 ; Kasbi, 2012).

The border between serious and non-serious games is very hard to determine. Some games that are generally considered serious are little more than competitions designed to stir people up but do not possess any truly educational dimension. One of the main reasons why serious games seem impossible to characterise and define with any precision is because of the multitude of very heterogeneous sources that have spontaneously produced increasingly similar objects that have converged to such an extent that they can gradually be categorised as serious games.

For Alvarez and Djaouti, a serious game is an "IT application whose initial purpose is to get serious aspects including but not limited to teaching, learning, communications or information, to combine coherently with playful aspects derived from video games" (Alvarez and Djaouti, 2010). According to Noah Falstein, President of the Serious Game Summit, serious games are intended to "make training more passionate and immersive" (2010 Innovations and international Perspectives of the Serious Game).

For the purposes of the present article, serious games will be defined as interactive video games whose main purpose is to teach practices and types of knowledge, irrespective of their organiser. Although they exist for playful purposes, their main objective is multimedia training and not entertainment, whether or not the participant is aware of this. This definition, despite being relatively precise, nevertheless requires a few precisions to better account for the diversity of serious games and associated challenges.

Although standard products do exist, serious games are usually customised projects specifically developed for each customer depending on their needs and corporate culture. The budget can be less than €50,000 for basic projects sold to small entities or anywhere between €100,000 and more than €1 million for sophisticated applications targeting larger groups. Some serious games in certain sectors are even much more expensive, one example being Pulse, a game developed by BreakAway that reproduces a complete hospital in 3D. Considered the most expensive series game ever, it supposedly cost more than €7 million to develop.

A paradox that managers can find hard to accept

Throughout their education, children, teenagers or young students are taking part in a very versatile world that is subject to constant innovation and where they can use each developmental phase to construct their intelligence, discover modelling and develop creativity by means of more or less playful experiences. This is nothing new. Baudelaire already noted that, "Children use games to demonstrate their great capacity for abstraction and powerful imagination. They play without toys" (Baudelaire, 1868). Today this ability is being vastly expanded through the use of information and communications technologies. Yet companies remain reluctant to engage in activities that are based on gaming or do not mesh with their current organisations.

"Talking about science fiction in areas such as economics or enterprise seems incongruous but it is anything but that. Science fiction constitutes one of several keys for opening new doors to people's imagination, providing a form of questioning that encourages lateral thinking or new perspectives towards the daily framework within which a company operates" (Tcheng et al, 2009). Note that science fiction authors' predictions have often been correct, inspiring and stimulating their contemporaries while warning against potential deviations and helping people to understand changes that might otherwise be too violent and therefore painful to experience at the individual level. Games enable a form of anticipation and simulation that is very realistic, to the extent that some people can lose themselves in games and spend even more of their life in a virtual world than in the real one.

As Bernanos wrote, "As children show us every day, you can be very serious about something you think is fun" (Bernanos, 1949). Yet since games are entertainment, managers often refuse to see them as anything serious or useful. In this view, games are vulgar and futile whereas management is noble and attends to major challenges. At the same time, as Heracles already explained 2,500 years ago, "People only reach their maturity when they rediscover the seriousness that was part of the games they played in their youth". Similarly, Plato wrote that, "You can discover more in an hour of playing than in a year of conversation". As for Jung, in 1936 he wrote that, "Creating something new is not achieved by intelligence but through the gaming instinct".

Some of the intelligence possessed by today's young managers is not welcome in companies where it is considered difficult to exploit. This is because intelligence of this sort may not mesh well with the institutional constraints accompanying current working methods. Nor do they lend themselves to rigorous monitoring; they can seem silly; and they often appear unprofessional. This is the type of intelligence that is developed, inter alia, through the use of video games mobilising new practices rooted in the rise of web 2.0 (and 3.0 and 4.0). In particular, it is characterised by (1) extensive knowledge of information and communications technologies (ICT), (2) the ability to find one's way through virtualised environments, (3) a capacity for combining talents in a way that makes it possible to achieve, working collectively, objectives that are inaccessible to people operating alone, (4) digital communications between very divergent social cultural profiles, and (5) the art of managing several tasks in parallel while zapping from one to the other without losing in productivity.

Digital intelligence is therefore already available and satisfies many companies' needs. Yet executives tend neither to measure it nor to give it serious consideration. Given the gap between young graduates' aspirations and the professional circumstances they are offered, the conditions they experience when arriving in the work world is likely to become crucial. Newcomers often feel that they are being crushed, constrained and excluded. They may feel that they are in the wrong place, and that little is done to make them feel valuable or capture the product of the new form of intelligence that they bring. In traditional companies where young recruits are offered a very specific function, they do not find the communal mindset that they were looking for and have to settle for suffocating verticality.

At the same time, the most innovative multinational firms do use virtual work teams and information systems rooted in modern technologies. The problem is that these intelligent new tools imply that users possess a different kind of intelligence, one that is complementary and not redundant. Brains are capable of more qualitative analytical tasks whereas computers store, combine, calculate and suggest solutions. It is the ability to control available technologies and the ease with which managers manipulate virtual objects that determines their ability to evolve in an environment, analyse it, take strategic decisions, improve professional performance and ultimately make progress.

Methodology

Our purpose is to characterise a phenomenon that is relatively new while increasing understanding of how it operates. As such, our goal is not only to come up with an exact image or representation of an emerging reality but to identify the properties of certain complex events. Based on the elements studied here, we will try to develop hypotheses that have an analytical vocation. By identifying relevant variables, the present study can then be extended through more quantitative approaches featuring more explanatory ambitions. To be precise, research at this level can be defined as hybrid exploration based on initial knowledge and seeking to "give meaning to empirical materials by undertaking frequent iterations between the empirical material that is gathered and theory" (Charreire and Durieux, 1999).

Regarding the study's fundamentally exploratory vocation, two limitations can be noted. From a descriptive perspective, the basic goal here is to describe things so as to understand them from inside out. As for the exploratory aspect, our aim is to determine under what conditions a human resource analytical matrix can be validly applied to the phenomenon of serious gaming. There is no attempt here to establish a causal framework but instead to enhance the emergence or characterization of key variables that might subsequently be tested along more deductive lines. This identification of possible causalities and explanation of possible causal variables remains key (Yin, 1981).

"In general, cases comprise a leading strategy for questions beginning with 'how' or 'why'; when the researcher has very little control over events; and when the focus is on a contemporary phenomenon in a real life context" (Yin, 1993). The use of serious games is very recent phenomenon with such games constituting a particularly unstable, innovative and complex evolution in human resource management modes. The application of a case method therefore fits the traits of our particular object of study.

The main purpose behind exploring complex situations though immersion in several cases is to clarify the interactions between different actors and enhance understanding of certain phenomena. This is because, "It is very doubtful that sociology can formulate so-called 'causal' laws given the unbridgeable discontinuity between cause and effect. Between an antecedent and its consequence exists a margin of uncertainty that is too intense to affirm a repetition of causes and especially to justify the assumption that these causes will produce the same effects in frameworks and circumstances that are fundamentally variable and fluctuating" (Gurvitch, 1962).

The contextualization of a phenomenon and its positioning in social, economic and historical circumstances is what allows researchers and then analysts to comprehend the origins and evolution of an object of research, the processes associated with it and the situation itself (Hlady-Rispal, 2000). This method enables a detailed examination of contemporary phenomena - serious games in the present case – with a view towards distinguishing them from their context. It is in this sense that the use of different data sources can be justified. Although this method may enable a modicum of flexibility, throughout its design phase it also requires reassurances as to the internal and external validity of its construction and reliability. Ensuring that the data used is reliable can mean implementing several different methods (Wacheux, 1996).

A multitude of serious games-related initiatives exist and are both polymorphic and highly spontaneous. In the practices and relationships being implemented through serious games, there are a large number of parameters that influence actors' behaviours. Moreover the strategies and interactions between actors can be extremely diversified. Observing these mechanisms in context and achieving global vision of everyone's motivations implies greater understanding and better performance measurement while enabling more qualitative analysis of the human resource management methods and processes being impacted in this way.

"The number of cases depends on the research objectives. If the purpose is to explore new practices or discuss an original line of questioning, one or several cases suffice to satisfy

the logic of discovery" (Wacheux, 1996). The choice of studying four cases is based on the need to have a sample that is both sufficiently small to enable in-depth qualitative analysis but also large enough for comparison purposes. Moreover, each case specifically corresponds to recruitment, training or the promotion of corporate values. It is the encounters and opportunities that arose over the course of the research that have conditioned the choice of cases. To be honest, whereas each corresponds to a particular human resource management activity, it is also the consequence of our research ambition as well as the result of a favourable set of circumstances.

The first reason for choosing this field of study is because it allows access to some companies. Having worked for a serious games editor has made it easier to get interviews with certain parties. This has involved participant observation (since the co-author also designs cases used in serious games); a compilation of secondary documents; and semi-directive interviews. To supplement this observation, questions were asked of serious games editors, customers and users to enhance understanding of the human resource management modes they face when using such games.

To ensure the responses' relevancy, the case method is validated by a triangulation of collected information, thus confrontation of data, narratives and theories from different sources. Management has triangulated methods for many years (Campbell and Fiske, 1959). Combining several methodologies largely provides the assurance that any variance will derive from the phenomenon under study and not from the method being used. Triangulation is often recommended either to deal with phenomena that are in the process of emerging or else with complex situations (Eisenhardt, 1991, Yin, 1981). With serious games, both of these conditions apply.

Serious games' impact on HR management practices and performance

To maximise the new tools' potentialities, a new form of intelligence will have to be implemented, one characterised by specific competencies such as extensive knowledge of ICT, an ability to find one's way around virtualised environments, a capacity for identifying and combining talents, digital cooperation between highly divergent socio-cultural profiles and the art of multitasking and zapping from one task to another without losing in productivity. Future managers from Generation Y – and soon Generation Z – can develop these competencies through video games or web 2.0 and 3.0 applications. Serious games are a natural extension of these processes (Solnet, Kralj & Kandampully, 2013).

Serious games play an important role in the evolution of HRM practices and the improvement of their performance in terms of new employees' recruitment, training and integration. The games are new brands sparking great interest and attracting audiences that are young, desirable and feature big potential for tools of this kind - and who are therefore attracted by the companies that offer them. This is the goal of games such as Ace Manager or Citizen Act that compete to detect the most brilliant finance students worldwide with a view towards their ultimate recruitment. The most talented applicants seek to face the challenges they are presented to demonstrate their superiority. Including serious games in top universities' training programmes attests to an academic acknowledgment of their educational power.

Serious games have also proven their usefulness for recruitment purposes. Having caused a real buzz online, Moonshield is publicising Thales's brand as a potential employer all across the world. As for L'Oréal and its Reveal game, the aim here is to uncover new talents by attracting students seeking an internship. Before playing, participants have to pass tests that a recruitment agency has designed. These games enable an initial triage of resumes followed by a recruitment selection based on objective performance comparison criteria. "Recruitment interviews increasingly involve role-plays. L'Oréal, which is particularly concerned with the quality of its human resource marketing, relies on this strategy with

business games that enable it to communicate about its business lines and talk about future possibilities. For instance, L'Oréal Brainstorm asks players to re-invent the group's brand" (Trotereau, 2008).

In a recruitment conference, serious games are primarily used to test players' ability to analyze situations, take the right decision in a limited period of time, improvise when the unexpected arises, optimize resources, coordinate competencies and propose new solutions while thinking out of the box. Potential recruits, even if they do not systematically make the right choice, must demonstrate that they are learning from their mistakes and have a strong ability to adapt. In addition to playing a game rooted in a variety of economic, political, social or ecological environments, other interactions can also be included, either involving virtual personalities characterized by heterogeneous profiles or else situations where players are pitted against one another. In turn, this causes random events to which people will need to respond appropriately.

"TF1 and Bouygues Télécom have launched an adventure called Virtual Regatta, where competitors sign up for a free virtual boat race. Participants choose the boat bearing the colors of one of the 25 companies that are present. If they win the race, they are guaranteed to meet the recruitment staff of the company whose colours they carry" (Trotereau, 2008). Serious games of this kind have benefited from considerable R&D and communications investments. They mobilize a very large number of managers who visit universities to enlist students, choose themes, create cases, run sessions, coach players, analyze performance and select the best teams.

America's Army is a game that has had a more positive impact on the enlistment of new recruits than all of the US military's other methods of communication or promotion combined, for a total cost of 3.4 million dollars in 2009, equal to 0.0006% of the nation's military budget (nofrag.com). Any manager would be happy if their company performed as well.

The playful dimension of serious games-based training is a very effective method for transforming an activity that can often be very boring and turning it into something fun. This is much more motivating for training game players since they will be able to read things, watch cartoons and videos, interact with the virtual environment thanks to their avatars and even take online tests (Ulicsak and Wright, 2010). Using multimodality to teach knowledge and practices involves visual memory, auditive memory, logical memory and motor memory in simulation games that involve, for instance, piloting or surgery, thus situations where each gesture is important.

Using repetition and permanent feedback motivates players to correct and perfect themselves. This is because serious games offer extremely realistic role-plays as well as challenges that put players in a position where they must stretch their knowledge and competencies. Players are particularly motivated when they can measure progress and analyze any errors they or their virtual partners make. Benchmarking young and old employees can also lead to a transfer of good practices, something that happens with Cash Detectives.

The Qoveo Company has designed a serious game called "A la recherche des données perdues" ("In search for lost data") where participants are plunged into a crime novel to learn good practices in the area of sensitive data protection. The idea here is to produce something that is accessible to everyone while building a catalogue of shelf products for an operating license of less than €60 per user. Note additionally that game engines can also be recycled nowadays, a development that will reduce design costs considerably. Refurbished with new stories and a new virtual environment, from now on other companies will be able to reuse older games.

Ostensibly, serious games are tools that encourage remote groupwork thanks to the many different digital tools that they offer: shared documents, blogs, video conferencing, etc. This makes it possible to integrate behavioral objectives more or less explicitly into the

learning objectives that are associated with a particular business. Serious games expose users to ideas, behaviors, processes, changes and tools. They help people to measure and correct their reactions in certain situations and signal mistakes in an entertaining manner, motivating participants to improve and surpass themselves.

"In the future, one of the most complicated challenges that HRM faces will be managing talents individually but in light of people's different personalities, competencies and ambitions, while getting them to adhere to a collective project" (Added et al, 2007). The new information technologies have created an illusion of equality between managers who become part of a community and can therefore no longer be singularized by their age, color, beauty, gender, level of education or accent. People can create new identities for themselves, protected behind their computer screen from any prejudice, using their extensive knowledge of tools to prove themselves. The balance of power is no longer determined by the same criteria. Long years of study are much less empowering nowadays than mastering certain virtual universes and new qualification and evaluation codes.

The next step may well be to add a layer of 2.0 to drive the further emergence of interactive learning communities that exchange and enriche contents by means of a collaborative approach. If so, gaming will find itself enriched by social learning. The cost of this solution is currently prohibitive, however: a game called "Conduire un entretien de vente" ("Carrying out a sales interview") cost Renault the tidy sum of €150,000. As for Thales, it spent more than €500,000 on Moonshield.

Cooperating on the monitoring protocol is crucial for a game's success, even if this is a dimension that is totally different from what the players' experience. In a classroom, teachers are in a position to respond immediately to learners' questions and correct any mistakes detected during an exercise. Tracking more than 13,000 players remotely is much more complex, however. The chosen system is intended to respond as quickly and precisely as possible to the questions that teams ask, whether this happens while the cases are running or after the solution has been given.

To get the answers to their questions, students must check a Facebook page, being a user-friendly site with which they are all very familiar. It remains that the front office is the only body in direct contact with customers. Its function is to orient and sort players' requests and diffuse any and all instructions. The monitoring team is committed to responding to players' queries within 24 hours. These requests can involve missing elements that impede the resolution of the case, errors in the way things are enounced, disputed outcomes or complaints about scoring processes. The number of queries usually rises as the game advances since the stakes are getting higher all the time.

All in all, the game could not exist without collaboration between players and designers alike. Even more intriguing is another dimension that is usually not envisioned at the beginning – the Facebook discussion threads that player teams also use to help one another. Teams get together to discuss solutions and share explanations once the results have been given. Under the circumstances, the things that people tend to look for (and which can be hard to determine in a classroom of ca. 20 students) often tend to develop spontaneously.

Despite widespread belief in serious games' usefulness, they also have a number of limitations, first and foremost being that they cannot train all audiences in all practices from all sectors. Human resource managers and trainers must try identify areas where serious games are real tools for improving practices and optimising individual or collective performance, and not just about gadgets or ways of communicating about a company's supposed modernity, exemplified through its use of games.

Games are not exclusive solutions but must be a part of a comprehensive training system, implementing transferable and transposable knowledge in virtual situations resembling daily life. "People often wrongly imagine that the game will be powerful enough to cause changes or create the kind of learning whose products are automatically useful to

decision-making. This is rarely the case" (Mayer and Bekebrede, 2006). Games are just one method among many others and should not be considered as anything other than one aspect of an overall approach to training as well as a medium that can be used to convey and transmit practices and knowledge (Klawe and Phillips, 1995; de Freitas and Oliver, 2006; Sisler and Brom, 2008; Ulicsak and Wright, 2010).

To obtain the best results, applicants or employees neither can nor must be happy to merely play. This is what happens in other sectors like healthcare, where Triage Trainer, a game developed by TruSim to train doctors and nurses to classify victims in the aftermath of catastrophe, is part of a training programme whose target audiences have received a manual, attended classes, participated in groupwork and carried out simulations. Tests show that players who went through an entire training programme and found the time to discuss their gaming experiences perform significantly better than those who engage in serious gaming alone (Ulicsak and Wright, 2010).

The knowledge and know-how acquired when using a serious game must be easily transferable and transposable to learners' daily practices. If the game is too different from their professional environment and if the players cannot connect virtual practices to real ones, the game's effectiveness is undermined. It is also important to measure whether a game's educational aims have been achieved. Given that serious games are open and offer players a great deal of freedom, this measurement is hard to do and is often neglected. In this case, the only thing that can be controlled is the players' involvement in the game and their performance - without it ever being really been clear whether they have learned to master the game's tools, processes or situations in a way that will enhance their work (Chin et al, 2009).
One of the main defects with serious games is that they can seem like gadgets. The fact that these tools are games can undermine their credibility for some people who become dubious as to their usefulness. It is important that a game be rigorously defined in terms of people's needs. Serious award-winning games will also be attracting players who will try to get around the rules. As with all games, participants can always cheat and play in a way that maximises their gains without their necessarily being very interested in the game itself.

Conclusion

With some serious games, it is possible to achieve business objectives by learning and benchmarking the different techniques associated with a specific function. In others, the objectives are more behavioural in nature since what is being encouraged is shared knowledge, collaboration, involvement and rigour. Where games are linked to a specific business and can therefore only be used in certain sectors, games of a more behavioural nature become quite easy to adopt and can be transposed to different types of companies.

Serious games have had considerable impact on human resource management practices in terms of recruitment, training, the integration of new employees, careers management or the promotion of corporate values and culture. Gaming information systems also permit new practices that improve HRM performance. These include benchmarking and the capitalisation of collective knowledge; the identification of exceptional talents that merit being integrated or promoted; greater employee awareness of topics that might normally be of little interest to them; and the simulation of extreme situations that can be difficult or impossible to create in the real world.

With external communications that mesh with the things that Generation Y wants, and/or by adapting the games to employees' working patterns, firms seem to have adopted serious games to the extent that these now appear as extra tools in their arsenals. Further research deepening our interviews and observations should enable a better characterisation of serious games' contribution to the field of human resource management.

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