A Clutch Moment for HR Big Data – How to Get it Started

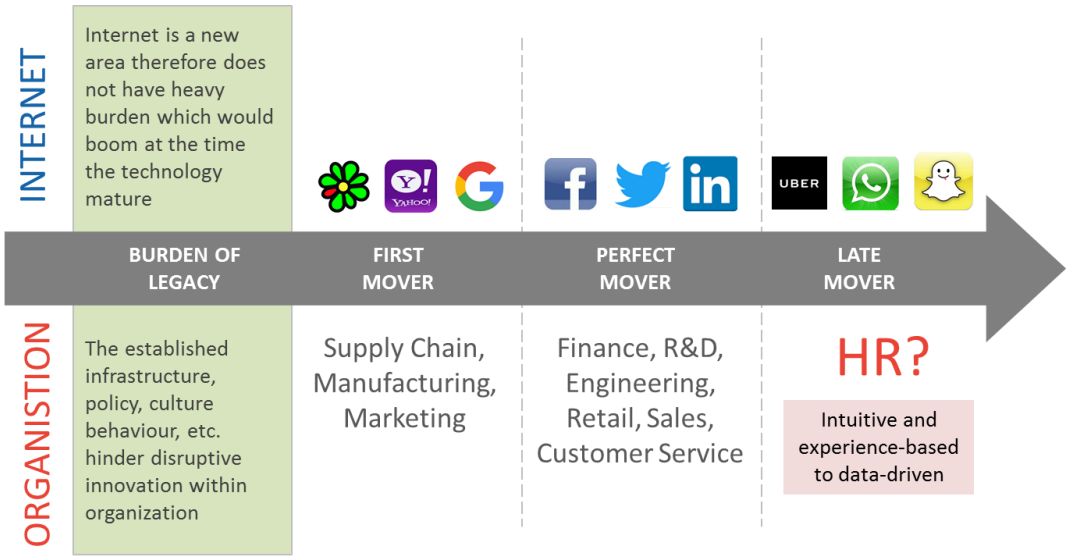
This poses additional threat to the value, or existence, of HR. We'd better be the perfect-mover today, than late-mover tomorrow. ***By Vincent Fung***

Big data is a buzzword and overwhelmingly everywhere. Data nowadays is created, extracted, accumulated, processed, analysed, interpreted in greater velocity. Enormous volume of data produced from multiple sources in various formats is referred as big data, which enables a migration from exactitude to magnitude.

It brings uncaptured economic value and innovation from all obtainable data. It would potentially transform the way we understand and do business because it provides a new lens filter for people to identify comprehensible findings and trends in the commercial world without the hassles of zooming into a mass of messy details.

In the boardroom, less is more. Business has been flooded with static and dynamic data with attempt to measure everything measurable, or even non-measurable. It demands sophisticated techniques in handling the huge datasets in order to convert the neutral meaningless data into useful insights, followed by actionable items. This article unveils the current state of HR big data development and essential starter pack for HR practitioners.

Figure 1: Stages of Development for Big Data within Organisation



Source: Comptify Analytics

Three Stages of Movers

People is obsessed with first-mover advantage. It sounds obvious – It enables the smart and brave predators to capture the easiest preys in the blue ocean. It can reap the most benefits by moving ahead of all competitors decisively to enter and dominate the market, by leading technologically, controlling resources and building buyer habits, but in turn taking considerable amount of risk for an unproven path. In contrast, later-entrants could take advantage of avoiding first-mover mistakes, enticing customers with less efforts, etc.

In the course of Internet evolution, there is little burden of legacy however its development is largely constrained by the technology bottleneck as well as the degree of market acceptance. Along with information technology breakthrough, it came the quick birth of a few Internet giants but also numerous losers in the competition (it is usually considered "no number two" in any Internet sub-sector). We could observe that, there are successful stories at each stage. For example, Google was outperforming others in the first-mover, Facebook in the perfect-mover and Uber in late-mover stage (although profitability is still in doubt, same can be said for Snapchat). This illustration reflects that, every stage of development can nurture its own winner. It breaks the myth of first-mover dominance. Early winners do not mean to take all or most.

In similar manner, if we put the job functions in an organisation into the stages (see Figure 1), the data-rich functions are usually the ones leading the curve, e.g. supply chain and marketing. They usually own mature internal and external data infrastructure for application of data. Modern supply chain management puts heavy focus on information technology in computerised shipping and tracking to reduce administration errors, monitor inventories and trace flow of goods to save both time and money rigorously. It is natural for them to implement big data or advanced analytics given the suitable technology is in place. Some other functions follow in the perfect-mover stage, namely customer service, finance, retail, sales, etc. These are the next layer of

number-driven functions in terms of data maturity and, therefore, are preparing themselves for the recent big data boom.

HR is Under Pressure

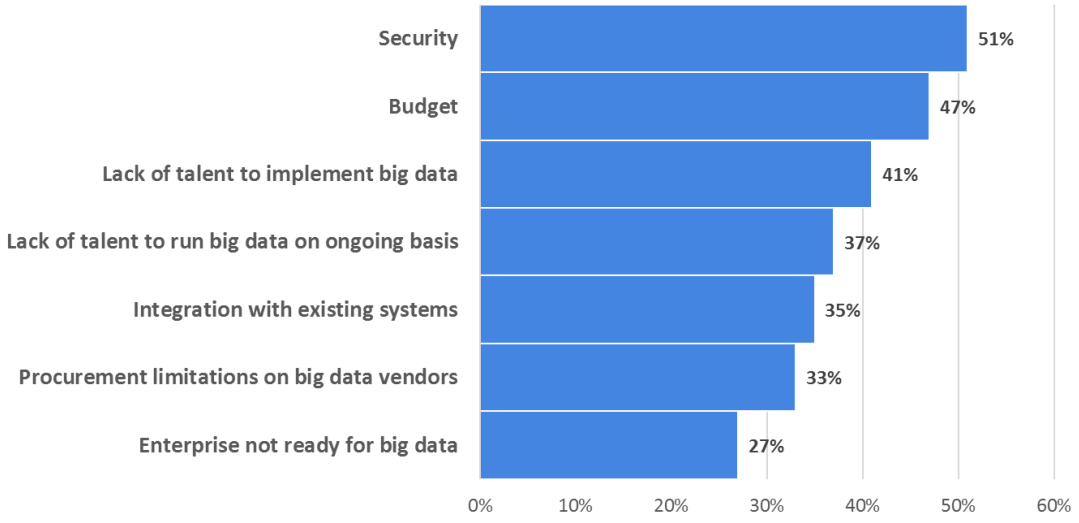
The pressing question is, where is HR? In traditional perspective, HR is perceived as a function guided by gut instinct and intuition. HR is not filled with fancy industry jargons but talks empirical evidence – Professional observation and experimentation. A broad explanation is that HR is designed to deal with people needs and psychology which are neither easy to be gauged nor quantified. As a result, HR has not been shaped to be ruled by vast quantities of information (with C&B as an exception) thus is less ready to climb on the bandwagon for big data.

Unfortunately, it is not wise to stay still at where we are while everyone is progressing and getting the bar raising. When CEO, business leaders, fellow functional leaders can articulate fact-and-figure language over the board table, they may soon impose the same level of expectation for HR, especially HR is undergoing a shift from back-office tactical to strategic business partner role.

> The good news is that the technology nowadays is dependable

Furthermore, for big data roll-up, there would be more cross-function data sharing protocols enacted. One seamless form is to establish a centralised data pool to host every data for access by users from multiple ends. For example, with Workday implemented, finance department can pull ready-made blended HR-Finance metrics or raw data from the portal for in-depth study without requesting from HR as in the past. This poses additional threat to the value, or existence, of HR if we do not upskill the industry in order to offer proactive analytics in respond to the changing management expectation. That said, if we, as HR, do not take up the new responsibilities, someone may do it for us. We'd better be the perfect-mover today, than late-mover tomorrow.

Chart 1: What are the main challenges to implement big data in your company?



Source: Big Success with Big Data, Accenture

"KYC" – Know Your Constraints

To launch big data projects, we need to understand what are the pull-back factors for this new initiative. From a survey conducted by Accenture, "Big Success with Big Data" (see Chart 1), the two challenges top the list are security (51% of respondents) and budget (47%), while the rest can be summarised as readiness of implementation for big data, encompassing talent, vendor, infrastructure and mindset.

Security is a major concern because big data involves a new model of storage for sharing of confidential data with functions no longer being silos but interconnected. There is usually contradiction between data security and privacy. The conventional data warehousing, structured database (e.g. MySQL), is like a contact list, with person's name as an identification along with the phone number, address, email, etc. When you do searching, you could go in alphabetical order by name systematically. In big data management, heterogenous data is stored within unstructured database (e.g. Hadoop) – Imagine you saved many different types of files into a stack of folders on your PC. You will need better techniques in indexing or more time to retrieve the files you need since it is less organised. People concern that the latter model may have security loopholes since it is rather new, or less familiar, while in fact, it is just newly popular.

The good news is that the technology nowadays is dependable. For example, if your computer has installed with the latest update of Windows 10, it is not prone to infection by WannaCry epidemic global outbreak in May 2017. The firewall is effective against Internet attacks unless you poke a hole on it due to whatever reasons, e.g. to enable remote access or remote desktop on the go. The analogy is that you cut your skin so the germs can start to slip in to cause infection. In normal circumstances, the security risk can be significantly mitigated by protecting data integrity and preventing divulgence through strict firewall setup, private data hosting, close ecosystem, segregation of data, encryption, and more.

The budget challenge is tricky. Anyone in corporate would know the difficulties to get budget allotted for brand-new projects. Management usually wants to assess it from estimated ROI (Return on Investment) angle, which deems to be the most direct and convincing argument for investment payback. Yet, sometimes this yardstick cannot be easily derived for some business activities. When your company enrols you in a MBA course, in what possible way you can quantify how much you contribute the acquired knowledge into your work? Big data initiatives are of this nature so using ROI for budget application is not quite feasible.

> Using objective "market force" is a better way than the ROI guesswork in initialising big data projects

Since HR big data is an emerging topic, an alternative method is to use "market force" to drive change. Actions related to benchmarking and mark-to-market may involve practicalities as well as crowd psychology. Individuals often adapt to the expectation of the surroundings and modify their own persona so as to identify with

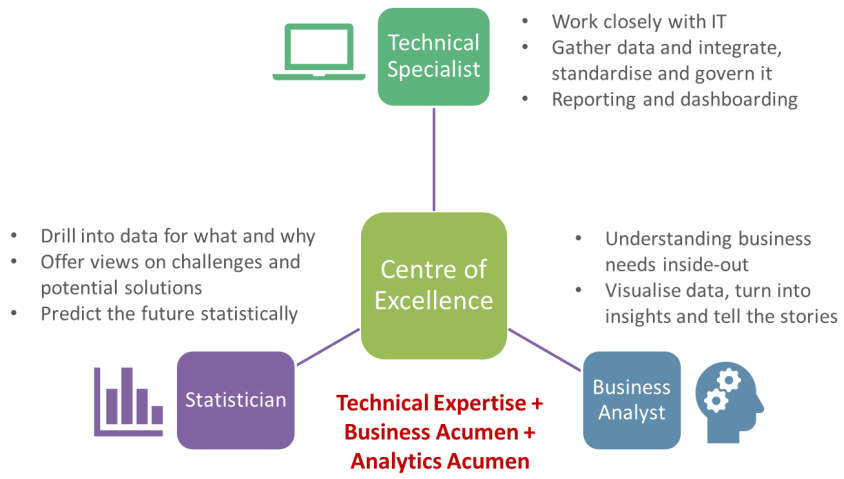
the crowd. For example, for fund managers, the smart tactic to protect the job is to keep up with the benchmark indices, although it would promote mediocracy at the same time.

If a practice survey shows that majority of companies already has a special force to explore the implementation of big data up and running, it offers strong signal for companies to get themselves out of the comfort zone to do something. In reality, to act prudently, it may be risky to lead however it is more risky if you don't follow and lag behind the crowd (the worst is you don't even know where the crowd is). For company's management, it is bare basic not to lose out in the competition while trying to outperform the peers. Seemingly, using objective "market force" is a better way than the ROI guesswork in initialising big data projects.

Forming the Formation

Doing big data analytics requires new skillset and also mindset to get it set to go. For example, the ELT framework (Extract-Load -Transform) for big data involves sophisti-

Figure 2: Three Pillars of Big Data Centre of Excellence



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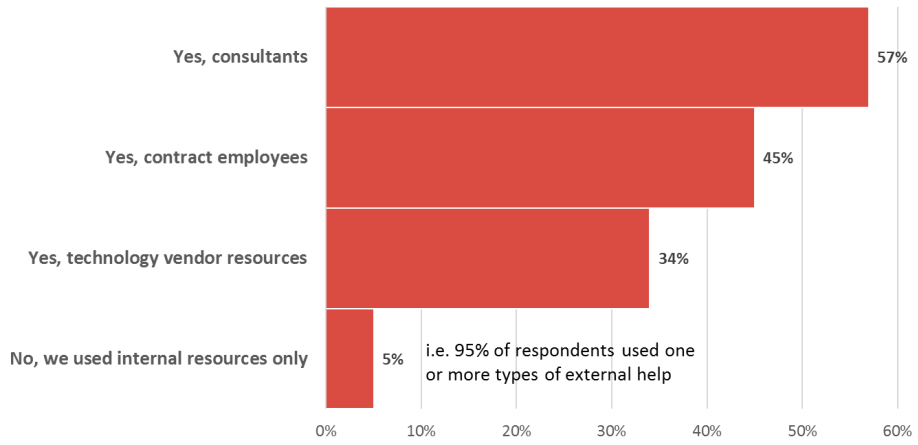

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cated skills for data analysts to execute transformation of mixed data into analysable datasets. Data integration and governance are the key issues in making HR big data live.

There are two common modes for data integration, namely database-level integration and analytics-level integration. The former targets at seamless integration of datasets in centralised or distributed systems for ease of retrieval. It requires advanced technical expertise and cost to deploy the new data model and infrastructure across functions. Whereas the latter involves no structural change on data management. It simply pulls data from available sources in various formats for analysis. It requires better hands-on skills (e.g. Excel VBA) in slicing and dicing the data and it is more readily implementable.

To put big data into practice, a cohort of professionals is required to form a highly-collaborative team, which may include Technical Specialist, Statistician and Business Analyst (see Figure 2). Each of them can bring unique values to make big data projects live:

- **Technical Specialist** – Technical expertise on working closely with IT; gathering data and integrating, standardising and governing it
- **Statistician** – Business acumen on drilling into data for what and why; offering views on challenges and potential solutions; predicting the future statistically
- **Business Analyst** – Business acumen on understanding business needs inside-out; visualising data, turning into insights and telling the stories

The team formation could be a talent hurdle and it will take time to build up the skills and knowledge internally. Training programs can be developed for the purpose in various forms, including internal

technical training, vendor-based workshops, business case workshops, etc. It demands broad learning to get ready for popularising the usage of advanced HR analytics and subsequently big data for organisations.

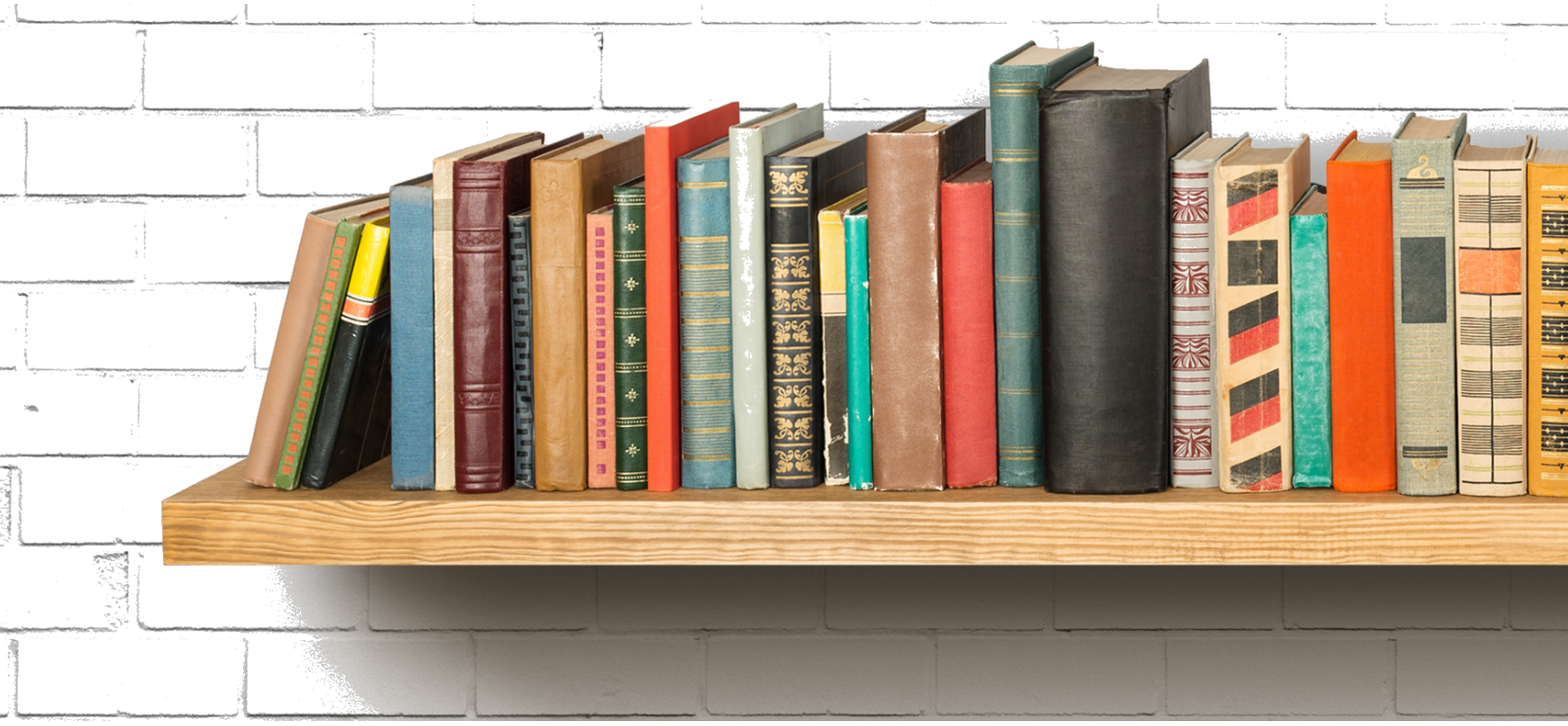
> Human's traits are partially determined by genes, same for organisations

The reality is that in-house resources alone may not be sufficient. Survey statistics (see Chart 2) shows that only 5% of companies does not seek for external resources for installing big data. Among those seeking for help, 34% appointed vendors, 45% employed contract employees and 57% hired professional consultants for assistance. These external parties can gear up the case by providing flexible resources and execution experience across companies.

Altering Organisational Genes

In employee mindset, it is no exception that even high-performers look for doing a good job within limited safety margin. Everybody is risk-adverse because it is the survival instinct for humans. Especially in the waterfall organisation structure, there is little room to behave differently or take bold steps to be innovative. It cannot be a general expectation for sane employees to do things in non-traditional way if the adventure would not result in gain but instead be penalised potentially. It is a matter of interest.

Human's traits are partially determined by genes, same for organisations. The line-and-box arrangement has genetic implications on organisational behaviours. For example, in manufacturing setting, the roles and responsibilities are cast in stone.



It enables efficiency in work execution as everyone knows exactly what they need to do and deliver. This kind of environment is rigid where a central data processing unit is more appropriate to be big data project champion.

But if you would like to foster a deep and wide analytics usage in bottom-up manner, you will need to inject agility into the organisation by making the structure fluid, e.g. team-oriented structure like Google, and promote related innovations throughout the company not just by saying it but also rewarding it. After all, who is the most likely to identify problems and suggest best-fit improvements in a specialised field? The subject-matter knowledge workers. That is why they are of paramount importance in modern business.

Moreover, big data also involves changing employee behaviour. Like even if you provide a set of analytics to the old-fashioned recruitment managers, without the right mentality, they are likely to fall back to their used-to intuitive approach of hiring, which has firmly rooted in people's mind and the industry for long time. It requires solid reasons or imperatives and practical trainings to shift them over.

In short, to make it works, we need to enlist more HR big data advocates in order to get the mission off the ground. It demands vision, know-how and, unsurprisingly, great deal of patience.

Coming Up Next:
The Technicalities for HR Big Data

About the Author

Mr. Vincent Fung is a Managing Consultant who heads up consulting business for multiple industries in Asia Pacific for Comptify Analytics ("CA"). Prior to that, Vincent worked in and was the Consulting Lead for Mercer-HRBS, a company acquired by Mercer in 2015, for more than 12 years. With background of information engineer, he has taken charge of initiatives for HR technology application and innovation throughout his career. He has undertaken strategic consulting/training and industry-focused roles in the region.

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