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# Blockchain is faintly changing the HR landscape - Here is how

We are seeing the power of this emerging blockchain wave in the HR landscape. With proven results, blockchain innovation is set to scale up to interest more HR practitioners. By Dylan Kwan, CryptoStandard

Following the recent bitcoin frenzy, its underlying blockchain technology comes into the limelight. Billions of dollars have been invested on blockchain development, particularly in the context of business applications. The financial services industry is the industry with most blockchain innovations. The best-known example is Ripple, a real-time settlement, currency exchange and remittance platform built upon blockchain, which is widely adopted across global banks. While blockchain's potential is highly disruptive, the landscape is nascent and developing. Considering the positive transformations brought to the financial services industry, more industries began to experiment and prototype practical use cases around blockchain.

In the HR field, blockchain is a big buzzword these days and with good reason. Last year, there were 435 ICO-financed blockchain projects, with 21 cases directly associated with the field of HR. For a fuller perspective of these blockchain projects, our Team initiated conversations with their senior managers. This report featured key insights and findings from our exclusive interviews with them.

With revolutionary features, blockchain is often quoted as the most important innovation second to that of the internet. Similarly, blockchain is going to streamline how businesses operate today. HR practitioners should keep a close eye on the development of the technology.

Figure 1: Blockchain Mechanism
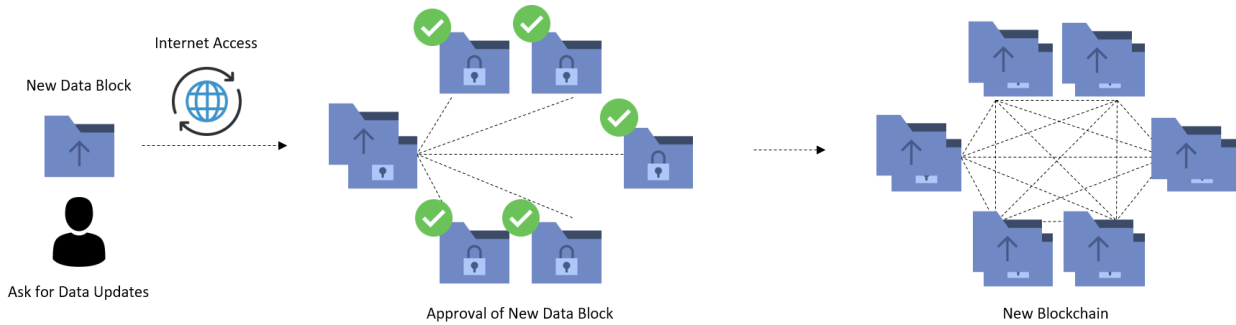
Source: CryptoStandard

What is Blockchain?

A general definition of blockchain is a decentralised database. It could be compared to Google Spreadsheet. It authorizes users access to review the same piece of information (i.e. block) available on the spreadsheet (i.e. blockchain), and maintains records of data change to uphold accountability. But different from Google Spreadsheet, blockchain is a database owned by all users (or some users, depending on the nature) instead of a single company.

For a definition in technical terms, blockchain is a new way to structure data in blocks, which allows the digital ledger to be shared across a network without a need of intermediaries. Other than saving costs, the removal of central authority prevents data manipulation by any single parties. All changes proposed to the chain will require approval by counterparties, depending on the mechanism (i.e. proof of work, proof of stake) adopted in the blockchain infrastructure. Once the change in data is adopted, all users on the chain can review the revised data record in real-time.

Figure 2: Desirable Features of Blockchain Technology

Source: CryptoStandard

Why Blockchain is Disruptive in Almost All Industries?

Among the multitude of features available on blockchain, we have identified three particular cases of business applications:
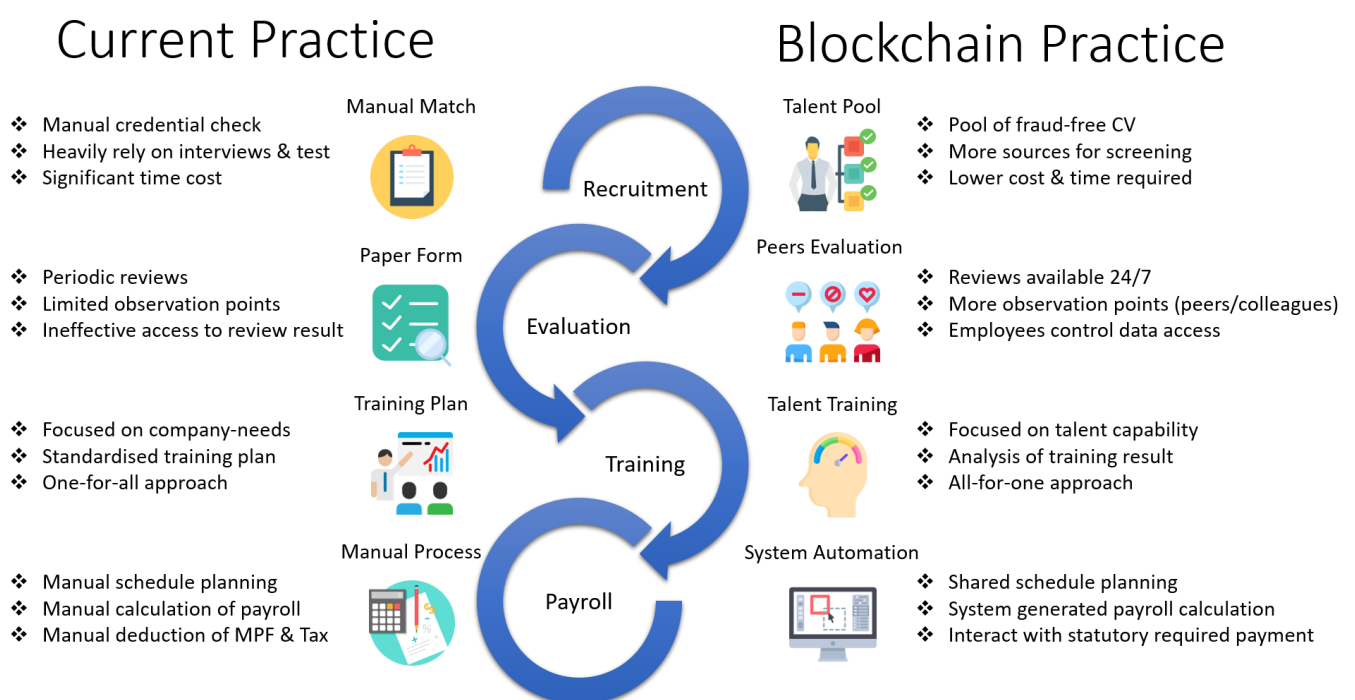
1. **Cryptographical encryption (Security)** – hacking is extremely difficult, if not impossible, because of its highly capital-intensive nature. Since ledgers are distributed, the process requires verification done by thousands of millions of computers and users. Blockchain simplifies requirements of server maintenance and improves data security.

2. **Trustless operation (Transparency)** – details of all data are recorded and available for inspection by every user on the same blockchain network, as identified by the design of topology and infrastructure.

3. **Reduction of third parties (Efficiency)** – as a secure and transparent technology, blockchain enables direct communication and exchange activities among network users. The need for third parties or middlemen becomes redundant within the blockchain ecosystem.

Blockchain revolution, particularly in HR industry, is still in progress to make an influence to the world. Figure 3 illustrates the current blockchain practices in HR as a high-level summary. In the following parts, detailed analysis on talent pool, overseas payroll and payroll calculation with blockchain will be covered.

Figure 3: Overview of Business Applications in HR

Current Practice

- ❖ Manual credential check
- ❖ Heavily rely on interviews & test
- ❖ Significant time cost

Manual Match

- ❖ Periodic reviews
- ❖ Limited observation points
- ❖ Ineffective access to review result

Paper Form

- ❖ Focused on company-needs
- ❖ Standardised training plan
- ❖ One-for-all approach

Training Plan

- ❖ Manual schedule planning
- ❖ Manual calculation of payroll
- ❖ Manual deduction of MPF & Tax

Manual Process

Recruitment

Evaluation

Training

Payroll

Blockchain Practice

Talent Pool

- ❖ Pool of fraud-free CV
- ❖ More sources for screening
- ❖ Lower cost & time required

Peers Evaluation

- ❖ Reviews available 24/7
- ❖ More observation points (peers/colleagues)
- ❖ Employees control data access

Talent Training

- ❖ Focused on talent capability
- ❖ Analysis of training result
- ❖ All-for-one approach

System Automation

- ❖ Shared schedule planning
- ❖ System generated payroll calculation
- ❖ Interact with statutory required payment
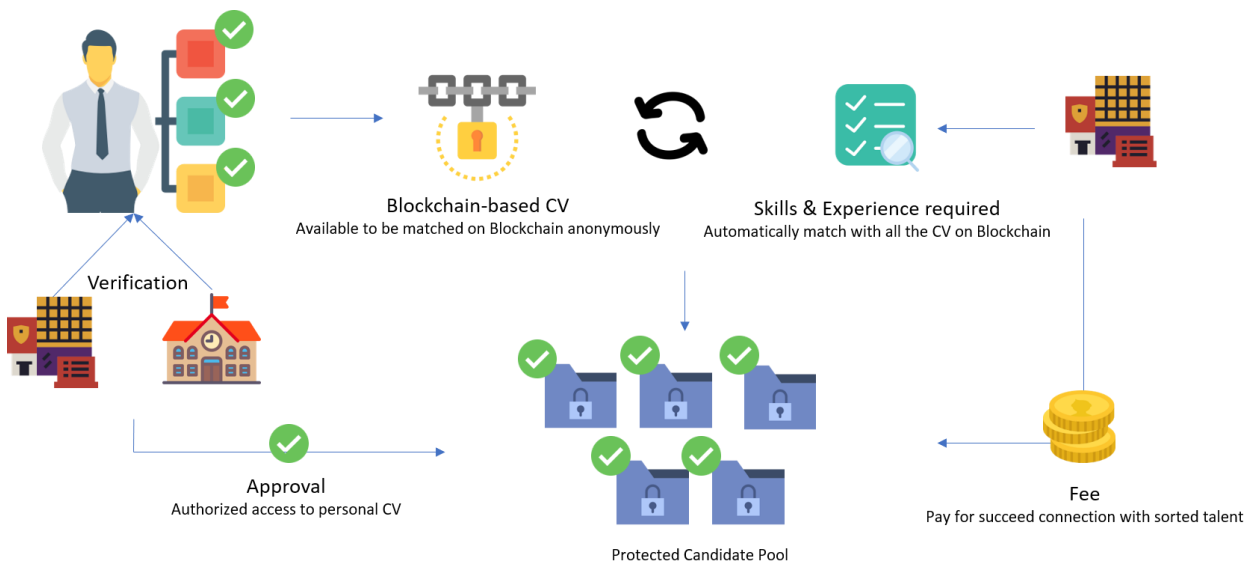
Source: CryptoStandard

Talent Pool

CV screening and due diligence are notable parts of the hiring process that demanded the most time and resources from recruiters. LinkedIn, as an emerging social network, offers direct access to rich data on talent pools and companies. It garnered over $1.7 billion revenues from job listing, alongside profit of over $800 million per year by holding and controlling professional connections. Behind these lucrative figures reveals the current costs for talent match, which speaks about the inefficiency of the matching process. A study by McKinsey predicts that one of the upcoming recruitment challenges will be a shortage of highly skilled individuals. In this context, blockchain is a highly plausible solution to overcome today's challenges in global talent connections.

CV platform is not uncommon in the world of blockchain. With such, candidates are able to manage their blockchain-based CV on the platform. They take full control of access right to their information, to ensure their data is shared only with desired counterparties. Qualifications, referring to both technical knowledge and soft skills, could be verified by institutions (i.e. Company, University). Other than that, feedback from colleagues could be uploaded onto the chain. Credentials and feedback could be viewed at near real-time. Not only does this enable dynamic criteria for talent matching, but also helps companies evaluate hidden tal-

Figure 4: Talent Pool Mechanism

Verification

Blockchain-based CV
Available to be matched on Blockchain anonymously

Skills & Experience required
Automatically match with all the CV on Blockchain

Approval
Authorized access to personal CV

Protected Candidate Pool

Fee
Pay for succeed connection with sorted talent

Source: CryptoStandard

ents of current hires. An interview with a leading UK-based blockchain CV platform revealed that, on top of basic functions, there are companies looking into AI systems to match talents with qualitative traits (i.e. company culture, peers evaluation system and performance matrix).
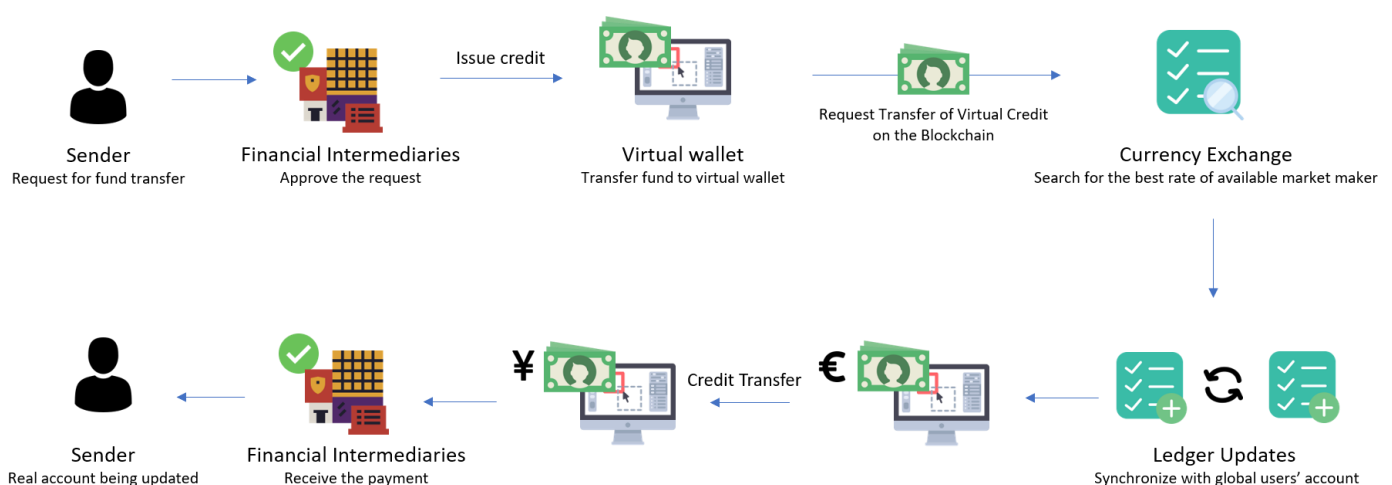
In the short term, this solution could reduce recruitment frauds and save time for background screening. Besides, real-time evaluation of talents provides a dynamic view of talents within the company, which will serve as a pivotal step in strategic workforce planning to unleash untapped potential. In the long run, with talent records on the blockchain, benchmark comparisons could be done at ease.

One reason that crippled the development of blockchain-based talent pool would be the limited incentives to verifiers, which typically refer to universities or companies. With benefits outweighing the costs of blockchain deployment on CV platform, the development will be pushed through, for example there are leading universities which have already established its own blockchain certification system.

Overseas Payroll with Blockchain

The first use case of blockchain is to conduct money settlement around the globe. This particularly speaks to companies with complicated business process outsourcing (BPO), which requires frequent overseas remittances. The blockchain platform serves the same, if not more functions of a

Figure 5: Overseas Payroll Mechanism

Sender
Request for fund transfer

Financial Intermediaries
Approve the request

Issue credit

Virtual wallet
Transfer fund to virtual wallet

Request Transfer of Virtual Credit
on the Blockchain

Currency Exchange
Search for the best rate of available market maker

Sender
Real account being updated

Financial Intermediaries
Receive the payment

Credit Transfer

Ledger Updates
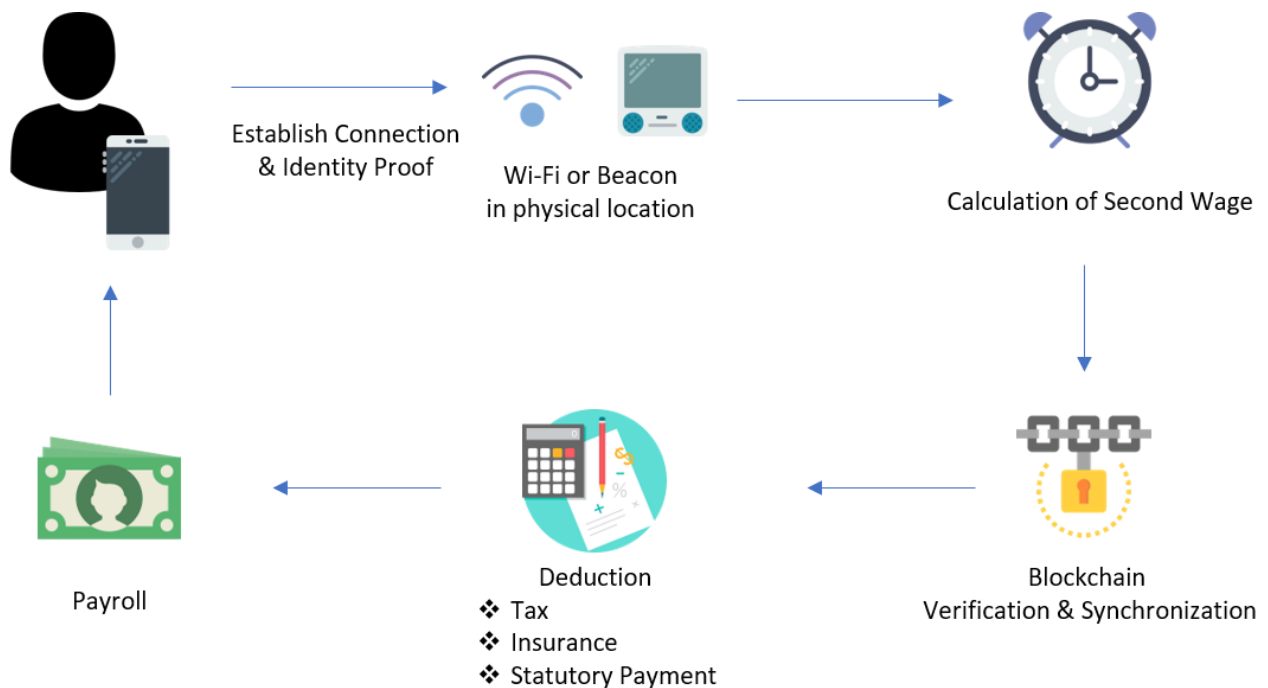Synchronize with global users' account

Source: CryptoStandard

bank, which included bank balance update in every 2-5 seconds. This ensures high degree of transparency of cash flows on the blockchain. For the implementation, upon the request and deposit of companies to send money overseas, digital credit is approved and supported by financial partners on blockchain. This ensures transactions are genuinely backed by money to facilitate information exchange. The system is designed to automatically match the best rate for currency exchange. It also connects with accounts held at other financial intermediaries. In such way, two-way transaction is enabled.

In 2016, reports recorded significant cost reduction figures in overseas payroll ($3.9 billion on foreign currency fees in Australia), particularly with cuts in hidden fees in areas of handling, exchange rate commission and flat fee etc. Because of the limited choice of currency exchange intermediaries in less developed countries, hidden fees could exceed far beyond budgeted amounts. Deloitte is the first mover in reducing cross-border transfer fees, by 40%, which is later followed by IBM and more than 40 global companies.

There are ways to integrate payroll system with cross-border currency transfer blockchain application. A Philippines-based blockchain payroll company built a

Figure 6: Remote Labors Management Solution Mechanism

Establish Connection & Identity Proof

Wi-Fi or Beacon in physical location

Calculation of Second Wage

Payroll

Deduction
❖ Tax
❖ Insurance
❖ Statutory Payment

Blockchain Verification & Synchronization

Source: CryptoStandard

platform for more than 500 companies to distribute US $10M monthly payroll to employees around the globe. The payroll system is seamlessly integrated with the direct credit of employees' bank account for cross-border transfers.

Managing Remote Labor Working Hour with Blockchain

With blockchain, measurement of working hours will become increasingly transparent, with minimal error. This is particularly impactful for industries that manage mobile workforce at multiple locations, for example the construction, F&B or FMCG industries. Friction in documentation with intermediaries (i.e. contractors, freelancer agencies) will be significantly improved. It also allows companies and employees to manage and review reports of working performance instantly. In the long-term, these are efforts to improve performance evaluation and human resources planning, which will better current industrial practices. Seven European giants in Property Management, Construction and Engineer industries are taking the first move to partner with blockchain solution companies to explore the blockchain-based contractual labour force management.

The Future of Blockchain

Similar to the internet, blockchain technology would soon become an indispensable component in the field of HR. In the future, one could visualise that HR would spend significantly less time on recruitment, background check and payroll calculation. Another important characteristic of blockchain-enabled future would be decentralisation. Talents are going to own their profiles verified by companies and universities. Direct communications between talents and companies would be more frequent. By getting rid of the inefficient third parties and being able to access to the most suitable candidates, companies could recruit their perfect talents - and talents could work at their dream companies.

Blockchain technology is not a silver bullet and it takes time to develop great business applications. There is a famous story from Barnes & Noble, the largest bookstore before Amazon:

"In early 1996, nearly a year after Amazon was actually ringing up sales, Steve convinced Len that they should look into the Web. He assembled some of Barnes & Noble's younger, tech-oriented employees and got to work. But at first, Steve didn't think the Internet would be anything more than an innovative marketing tool for Barnes & Noble's brick-and-mortar stores." The rest is history. Early adopters of the technology are usually the ones who help set the standard. And now would be the best time for HR practitioners to explore and adopt the blockchain technology. ■

About the Author

Dylan received education at both Harvard University and Hong Kong University of Science and Technology. He is a Certified Blockchain Expert™ who has in-depth experience in blockchain research. In particular, he developed a 10-dimension model to evaluate ICO and blockchain projects. His research and analysis are welcomed by over 20,000 blockchain community members. He represented CryptoStandard and spoke about blockchain in Chinese Entrepreneurship Network. He also has rich working experience. He worked in Credit Suisse investment banking division, Sun Hung Kai Properties, a New York-based venture capital firm and did consulting work at Mercer-HRBS.

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