[Speech by SFST at 2018 Annual Conference of In-House Lawyers (English only)](#)

Following is the speech by the Secretary for Financial Services and the Treasury, Mr James Lau, at 2018 Annual Conference of In-House Lawyers hosted by Law Society of Hong Kong today (June 6):

Thomas (President of Law Society of Hong Kong, Mr Thomas So), Maggie (Chairlady of In-House Lawyers Committee, Ms Maggie Tsui), distinguished guests, ladies and gentlemen,

Good morning. I am very excited to join you all at today's conference. Technology is very close to my heart as I studied computer science at the University of Waterloo many years ago. With the revolutionary advances in technology especially in the last few years, we have seen Industrial Revolution 4.0 and your conference theme of Technology and Law is a very apt choice.

The world is in the midst of an unstoppable wave of innovation and technology that has unprecedented reach on a global scale, causing disruption and disintermediation. For the legal field, there are many new opportunities and challenges and such discoveries require the legal professionals to keep pace with the latest technological developments.

Let me illustrate briefly with two aspects of the new technology, i.e. Artificial Intelligence (AI) and Blockchain or Distributed Ledger Technology.

First, on AI. While there are those who worry that advances in AI may diminish the role of lawyers or even replace them altogether, others see AI as a tool that allows lawyers to focus on higher value work that is more complex and more intellectually stimulating. Indeed, while McKinsey estimates that 22 per cent of a lawyer's job and 35 per cent of a law clerk's job can be automated, the picture is not all that bleak for those who can adapt and use AI as a helpful tool. To my mind, in future there might well be more cross-over between law nerds and tech geeks.

In litigation, for now, it would be difficult to imagine a robot lawyer replacing a barrister at court. But who knows maybe in future the junior counsel seated next to a barrister at courts could be a robot that did all the basic research and can do speedy retrieval of information, analysis and argumentation as and when required. Actually, AI can be a truly helpful tool that would help barristers or trial lawyers prepare for cases. From now on, I am going to cite some examples of how AI has been applied in your field. I would however refrain from citing the names of firms or products in order to maintain neutrality here. In fact, some these firms are seated among the audience and speakers too.

So, my first example is about a startup that has designed a software riding on AI to apply natural language processing to millions of court decisions to find trends that would be helpful for the trial case in question. For instance, the software can determine which judges tend to favour plaintiffs, summarise the legal strategies of opposing lawyers, and determine the arguments most likely to convince specific judges.

Some of you might have seen a recent TV series from the United States, currently showing in Hong Kong. It is about a legal consultant using de facto AI in choosing jurors, forming a panel of shadow jurors, and choosing witnesses that would help turn the stance of the jurors in the court by checking the reaction of the shadow jurors. You might well think that this TV series is really over-dramatising things. Actually, I agree with you on that one but who knows what future might hold? My guess is that in future the legal consultant does not need to take pains to find shadow jurors that resemble the real jurors in terms of education and professional background, political or moral inclination, like or dislike etc. This is because AI can rely on big data to find all one can possibly find about the nature or habits of the real jurors, and AI can simulate a panel of jurors to predict their inclination and reaction in the course of trial.

And AI is also assisting judges, and not just lawyers, in certain court systems. In the United States, there are instances of AI assisting judges in deciding whether to detain or release a defendant before trial. A company has developed three different risk assessment algorithms to assess the risks that a released defendant will fail to appear for trial, commit a crime while on release, or commit a violent crime while on release. This methodology is currently in use in about 40 cities, counties and states across the United States.

In April this year, the designer of these algorithms announced that it would seek to develop a deeper understanding of the effectiveness and impact of risk assessment. Over the next five years, a group of national pretrial researchers will work with 10 selected, diverse jurisdictions to understand the impact on a jurisdiction after it is fully implemented. They will also broaden the study of the accuracy of the prediction, develop and test new potential algorithms, establish offence-specific risk assessment models, particularly for drunk driving, domestic violence and sex crimes, and deepen the field's understanding about the impact pretrial detention has on defendants' lives. This would appear to be a step forward in improving the process of utilising AI in the court system.

In corporate law, a number of successful applications in AI suggest that technology can relieve transaction lawyers of hours and hours of data intensive, time consuming and repetitive work.

One example is an AI tool developed by a law firm. This solution was developed in response to the need to classify different entities into ones that fall within the definition of a "financial institution" under the new bank ringfencing reforms, and ones that fall outside the definitions of the

relevant legislation. The tool can sift through 14 UK and European regulatory registers to determine whether client names fall under the definition of a "financial institution", quickly processing thousands of names in a fraction of the time a junior lawyer would need to spend on the same task.

Another leading law firm has partnered with a Big Four accounting firm to create a tool that codifies the law in various jurisdictions and automates drafting of certain documents to help banks cope with post financial crisis regulations for the over-the-counter (OTC) derivatives market. With uncleared OTC derivatives being subject to margin rules under the European Market Infrastructure Regulation (EMIR), all counterparties to derivatives contracts which are not cleared through an authorised clearing system will have to provide additional margin for their net exposures. This tool handles the drafting of tailored documents based on an automated legal analysis, reducing the time for each document from three hours to just three minutes.

Yet another international law firm developed its own AI platform to read and analyse clauses in loan agreements. The system emulates the decision-making process of a human being, extracting, reviewing and analysing key contract risks, and connecting lawyers to relevant templates, documents and precedents at the right moment.

In addition to law firms, a large tech company has also moved into Lawtech by developing a robot lawyer that performs legal research. The application allows one to ask questions in plain English, as one would to a colleague. The robot then reads through the entire body of law and provides specific, analytical answers that include topical readings from legislation, case law and secondary sources. All of the above examples reflect the potential of AI to be a helpful tool for corporate lawyers.

In fact, some have predicted that robots and algorithms could help make legal aid more accessible and widespread, especially to the less privileged. Some proponents argue that cases can get navigated through an AI computer system first, and legal aid lawyers would only get involved at the very late stage when it was really necessary.

So it seems that AI applications can generally help to process and analyse data, structured or unstructured, in a much faster and efficient manner, and probably be more accurate and comprehensive than an average human being. Let me now cite some examples how AI can help end consumers understand legal issues and defend themselves. There is a system that was originally designed to contest parking fines in London and New York. It has a chat-like interface to guide users through a series of simple automated questions to gauge whether a parking appeal is possible.

After asking questions such as "Were the signs clearly marked?" and "Were you parked illegally because of a medical emergency?", the system generates a letter that can be filed with the appropriate agency. The system also helps people demand compensation from airlines for delayed flights and file paperwork for government housing assistance. All these sound very normal and probably familiar in a litigious society.

Another potential area for Lawtech applications that target the end consumer is the provision of legal advice on divorce. Divorce disputes typically require navigating lengthy and confusing cases that have been interpreted in thousands of previous decisions. Some believe that robot lawyers could analyse possible exceptions, loopholes and historical cases to determine the best path forward. Already, a website is providing such services. After getting clients to fill in a form and provide information, it uses algorithms to try to predict how the divorce will progress and provides services to their clients based on that prediction.

So far, it sounds like AI is really a fantastic, impartial tool that can cut down the mundane work and improve the quality of life for lawyers and barristers. But there are problems with AI applications too. One concern is that the use of robots and algorithms may result in discrimination and bias. Each predictive algorithm is inevitably based on a series of subjective decisions on the part of system designer on what data to use, include or exclude, and how to apply weighting to the data on the degree of their importance. In addition, a programmer's personal history, incentives and motivations would potentially affect the design of the algorithm. The transparency of the process of algorithmic design and assessment of its effectiveness after its implementation is thus crucial. This is particularly true for the cases like the one I mentioned earlier, where AI assists judges in deciding whether to detain or release a defendant before trial.

In other words, at least for the present there is apparently a challenge to come up with a truly bias absent or neutral AI technology solution. Incidentally, globally there is now a movement toward exploring the role of ethics in AI. The European Group on Ethics in Science and New Technologies, an advisory group to the President of the European Commision, released a statement on AI, Robotics and Autonomous Systems in March this year, highlighting the need for a collective, wide-ranging and inclusive process of reflection and dialogue on the role of technology in human values. So the ethical development of AI is a huge subject that requires the debate and participation of professionals from all industries and all walks of life, including those in the legal field.

Let me now turn to my second topic on blockchain, a type of distributed ledger technology. Blockchain is a digital ledger of transactions, contracts and agreements that is distributed across hundreds or even thousands of computers around the world. The benefits of blockchain technology include mainly security and transparency. Some say speed is also a blockchain advantage but that really depends on the design of the blockchain. In many public chain applications, where a large number of participating nodes need to validate a transaction entry before it can be added to the blockchain, processing speed can hardly be claimed to be an advantage as it could take several minutes to validate the transaction in question.

Security is generally accepted as an advantage because the information contained within the distributed ledger is tamper proof. If the ledger is shared across 1 000 nodes and a hacker wanted to change information in one of

the blocks, the hacker would have to hack all 1 000 nodes simultaneously. And transparency because all nodes in the chain can see changes to a block, and decide whether it is an authorised change. But this authentication takes time to process and this is often cited as the scalability or speed problem associated with public chains like that for Bitcoin which I am sure you have heard of.

There are a number of potential applications of blockchain technology in law. One area is land registration, where blockchain promises to be an effective and secure method to store the data essential for property rights, such as land ownership and the details of when it changed hands. Indeed, there is potential for a distributed ledger to replace a paper-based land registration system.

A number of jurisdictions around the world are already exploring the use of blockchain technology to modernise, add security to and speed up the land registration process. In the United Kingdom, their Land Registry recently announced its intention to embrace new technology, including blockchain technology, in what could be the most "far reaching transformation in their 150 year history."

In Sweden, the land registry authority has been testing a way to eliminate paperwork, reduce fraud and speed up transactions through recording property transactions on a blockchain. It is estimated that this could potentially save Swedish taxpayers more than €100m a year.

In the Middle East, Dubai is developing a system that would record all local real estate contracts on a blockchain as part of an overall plan to secure all government documents on a blockchain by 2020. And in India, legal experts have also spoken about the potential benefits of a public distributed ledger to digitise land records and set the precedent for future transactions, ensuring a legitimate, government-approved record of transactions.

Apart from land registration, another potential application of blockchain in the legal field is in alternative dispute resolution, including arbitration. While arbitration is often used for resolving disputes in international business, the process is lengthy and costly. A blockchain platform could provide a secure and transparent platform for capturing negotiations, agreements, and the terms of a resolution, where every fact and detail would be available and traceable to relevant parties.

In March this year, a US legal technology startup unveiled a blockchain application specifically for the international dispute resolution community. The application intends to utilise blockchain technology to eliminate the need for couriers, hard copies and mailing in the arbitration process. This blockchain portal is held by an arbitral institution and claimants can file requests for arbitration through the portal. Documents can be drafted, finalised and submitted directly, and all of the involved parties will be able to access the data associated with the proceedings. Claimants will also be able to view their final award on the portal.

Yet another way blockchain technology could potentially transform legal processes is in relation to notaries public. Currently, notaries public confirm and verify signatures on legal documents, such as deeds and contracts. This is an important process in the court system. For example, in the United States, courts require a specific set of rules to be followed when submitting and verifying evidence such as emails, documents and records in legal proceedings.

This is where blockchain comes in, since the technology can record and authenticate evidence securely by preserving them as part of a digital ledger. In the United States, Vermont is the first state to legislate the use of blockchain technology to verify records and information. Already, a company has developed several products that apply blockchain technology to legal documents, thereby eliminating the need for the rubber stamp of a notary public.

While blockchain technology is promising, it is not without its perils. One general concern is the lack of identity verification through "Know Your Client" or KYC processes. In conventional transactions, intermediaries such as banks conduct identity verification and are responsible for building trust between two parties. Some blockchain applications skip this process altogether through anonymous transactions, although some applications do claim that they enforce rigorous KYC, as I had heard from some cryptocurrency exchange operators.

Another challenge is the cross jurisdictional nature of blockchain because the nodes on a blockchain can be located anywhere in the world. In a conventional banking transaction, if the bank is at fault for a transaction, the bank can be sued and the applicable jurisdiction will most likely be contractually governed. However, in a decentralised environment, it may be difficult to identify the appropriate set of applicable governing rules and laws.

Yet another challenge is the legal status of Decentralised Autonomous Organisations (DAO), which are essentially digital entities that record activity on the blockchain and require minimal to zero human input into their operations. Questions would naturally arise on the legal power of such organisations. For example, would they be regarded as a corporation or a legal entity? Should they have the power to enter into legal contracts, to sue and to be sued? And who would be responsible if laws are broken? And the triggering of smart contracts in the blocks of Ethereum also raises the question of responsibility for the actions by such smart contracts and who should be responsible for picking up the pieces in such a distributed environment when a smart contract malfunctions or the block is hacked. The above are examples of concerns that need to be addressed by governments and regulators in consultation with industry players and the public at large. For those of you familiar with the cryptocurrency Ether that is associated with the Ethereum platform, Ethereum is based on this DAO construct. So DAO problems as mentioned above are real issues to be addressed, when there are more and more of users of Ethereum or similar platforms.

Ladies and gentlemen, in conclusion, the intersection of technology and law is a fascinating topic that has economic, social, legal as well as ethical implications. I hope I have illustrated well for you how AI and blockchain present a maze of opportunities as well as challenges for the legal field.

One challenge I should mention is cyber security, which is going to gain headline attention and probably provides fertile ground for court cases involving such perpetration of cybercrime. Another challenge is data privacy, which is of course not a new subject but it is going to gain more prominence in the new tech world, especially when so many social media platforms and apps of all sorts collect so much personal data, with or without the data subjects realising it. And some news reports in the last few days mentioned that some data sharing had been done deliberately, even though the data subjects had already opted to refuse third-party sharing of data. Data would be a central element of the new economy and the profit driver of many new business models. And I would suggest that data could well be the source of many legal disputes in future.

Well, I hope the above would help to whet your appetite to dig deeper into this subject of technology and law. Your conference has a rich agenda to be covered by many eminent practitioners in the field. And I encourage you all, as lawyers, to embrace technology. This is not to avoid losing your practice to AI, robotics or other areas of new technology but to take on the challenges posed and assist the legal community to find possibly new or refined legal frameworks to tackle such new legal issues and problems. And perhaps some of you might become so interested that you wish to cross over to the tech field and become truly tech savvy legal professionals too. Let me wish you all a fruitful conference. Thank you.

[Hong Kong Customs seizes suspected rhino horn and worked ivory (with photo)](#)

Hong Kong Customs today (June 6) seized about 5.9 kilograms of suspected rhino horn and 410 grams of suspected worked ivory with an estimated market value of about $1.2 million at Hong Kong International Airport.

Customs officers intercepted a 40-year-old male passenger at the airport this morning. He arrived in Hong Kong from Johannesburg, South Africa.

During Customs clearance, the batch of suspected rhino horn and suspected worked ivory were found concealed inside three food packing boxes

in his check-in suitcase. The man was then arrested.

The case was handed over to the Agriculture, Fisheries and Conservation Department for follow-up investigation.

Under the Protection of Endangered Species of Animals and Plants Ordinance, any person found guilty of importing or exporting an endangered species without a licence is liable to a maximum fine of $10 million and imprisonment for 10 years.

Members of the public may report any suspected smuggling activities to the Customs 24-hour hotline 2545 6182 or its dedicated crime-reporting email account (crimereport@customs.gov.hk).

[Opening address by S for IT at Hong Kong Internet of Things Conference 2018 (English only)](#)

â€‹Following is the opening address by the Secretary for Innovation and Technology, Mr Nicholas W Yang, at the Hong Kong Internet of Things (IoT) Conference 2018 today (June 6):

Anna (Chief Executive of GS1 Hong Kong, Ms Anna Lin), Andy (President of the Hong Kong Internet of Things Industry Advisory Council, Mr Andy Bien), Charles (Legislative Council member Mr Charles Mok), distinguished guests, ladies and gentlemen,

Good morning. I am very pleased to join you at the Hong Kong Internet of Things Conference 2018. For the sixth year now, this Conference has provided an excellent platform for experts and practitioners to share insights on the latest development of IoT technology and innovative IoT solutions. Today's theme "Unleashing the Real IoT Business Values" rightly reminds us the great

potential of IoT in transforming enterprises into digital businesses and facilitating new business models, improving efficiency and enhancing customer engagement.

Over the years, IoT has been widely adopted in different sectors and transformed the world of business. Gartner predicts that by 2020, more than 65 per cent of enterprises worldwide will adopt IoT products.

For Hong Kong, IoT has long been deployed by the public as well as the private sectors for meeting different needs. In fact, Hong Kong is well-prepared to embrace the new era of IoT. A new licensing agreement for provision of Wireless Internet of Things platforms and services has been announced by the Communications Authority last year. Together with other technologies like big data analytics and artificial intelligence, IoT is also the cornerstone of a successful smart city. In the Smart City Blueprint for Hong Kong released last December, we have mapped out development plans in the next five years under six major areas, namely Smart Mobility, Smart Living, Smart Environment, Smart People, Smart Government and Smart Economy.

There are ample opportunities for deployment of sensors and IoT applications under each of the six areas, such as traffic detectors at all strategic roads to provide real-time traffic information, remote sensing devices to monitor air pollution and cleanliness of streets and public places, and RFID (radio frequency identification) and Bluetooth technologies to monitor vital signs of patients and healthcare management in smart hospitals.

A major IoT project for smart city development is the pilot Multi-functional Smart Lampposts for installation of 400 smart lampposts at four urban locations, i.e. Causeway Bay/Wan Chai, Central/Admiralty, Tsim Sha Tsui and Kwun Tong.

Equipped with sensors, data networks and related digital facilities, the smart lampposts can enhance city management through collection of real-time city data like weather, environment, transportation and crowd flow. The data collected will be available on the Government's open data portal, data.gov.hk, for free access so that innovative applications can be created by the community. These smart lampposts will also be suitable for installing microcell stations of fifth generation (5G) mobile communications services and providing Wi-Fi and future 5G services to the public and tourists. We target to roll out the first phase in Kowloon East for use before mid-2019.

I am pleased to see our private sectors are also adopting Narrowband IoT (NB-IoT) and Low Power Radio Access technologies to facilitate the development of IoT solutions which will help drive Hong Kong into a smart city. Examples include 3 Hong Kong collaborating with Huawei in construction of an NB-IoT network, China Mobile Hong Kong and Sino Group developing a pre-5G infrastructure across Sino Group's residential and commercial properties, and SmartTone and Kai Shing Management Services Limited enabling smart property management solution at International Commerce Centre, and the Pixel Networks deploying the first city-wide low-power long range IoT

network, to name just a few.

IoT solutions will give competitive advantages to enterprises large and small. With IoT, we can also turn Hong Kong into a more liveable and smarter city. Today's distinguished speakers will certainly give us more ideas on how to harness these technologies.

Before closing, let me express my gratitude to GS1 Hong Kong for hosting the Conference. I wish the event a huge success, and every one of you, a pleasant and rewarding day. Thank you.

[Red flags hoisted at several beaches](#)

Attention TV/radio announcers:

Please broadcast the following as soon as possible:

Here is an item of interest to swimmers.

The Leisure and Cultural Services Department announced today (June 6) that due to big waves, red flags have been hoisted at Stanley Main Beach, Turtle Cove Beach, Shek O Beach and Big Wave Bay Beach in Southern District, Hong Kong Island; Hung Shing Yeh Beach, Lo So Shing Beach, Pui O Beach, Lower Cheung Sha Beach and Tong Fuk Beach in Islands District; and Hap Mun Bay Beach and Clear Water Bay First Beach in Sai Kung District.

Meanwhile, due to inclement weather, red flags have been hoisted at Clear Water Bay Second Beach and Silverstrand Beach in Sai Kung District.

Beach-goers are advised not to swim at these beaches.

[No. 3 alarm fire in Wong Tai Sin (5)](#)

A No. 3 alarm fire, which broke out at an industrial building at 27-29 Ng Fong Street in Wong Tai Sin at 10.15pm last night (June 5), was today (June 6) surrounded at 5.13am, put under control at 5.54am, and largely put out at 7am.

Firemen used 3 jets and mobilised 4 breathing apparatus teams to fight the blaze.

No casualties have been reported so far.