



During my tenure as Chairman of CAHK, I have witnessed the most exciting times of our industry in Hong Kong as key milestones in 5G development were attained. 5G has now become a reality after years of infrastructure planning, technology and applications testing, spectrum auction/allocation, to rollout of commercial services.

## 5G in Reality

In October and November 2019, OFCA has successfully completed the auctions of 5G spectrum (3.5GHz, 4.9GHz, and 3.3GHz ranges), followed by the award and release of 5G spectrum to four mobile network operators (MNO), namely, China Mobile Hong Kong (CMHK), Hong Kong Telecommunications (HKT) Limited (HKT), Hutchison Telephone Company Limited (HTCL) and SmarTone Mobile Communications Limited (SmarTone).

With the launch of 5G services by these four operators on 1 April and 26 May 2020, we have embarked on a new era of 5G mobile technology. The potential economic value of 5G technology applications is estimated to reach US\$4.3 trillion over the next six years across major vertical industries worldwide, according to KPMG.

## What are the prospects of 5G applications?

Allow me to respond to this frequently asked question highlighting the key benefits of 5G towards selective industries.

### 5G Benefits to Aviation Industry – Smart Airport

Smart Airport shapes the future of travel experience. It enables real-time gate and stand planning and allocation by integrating 5G technology with smart video analytics solutions to enhance terminal management.

As for passengers, 5G, Artificial Intelligence (AI) and Robotics are integrated to guide passengers to service points in the form of “Guide & Go” at the airport.

### 5G Benefits to Media and Entertainment Industry – Livestreams via 5G

Popular events like K-Pop concerts and Esports games can be watched in Hong Kong via 5G livestreaming. Mobile advertising companies can now generate revenues through content delivery service and Ad-supported videos. With 5G, there will be more opportunities for higher quality and innovative ads; brands and advertisers can gain insight for creating personalised ads through real-time data analysis of the mobile data.

For the viewers, 5G-powered service offers smoother livestreaming performance and real-time response and chats to viewers in different countries, bringing the world closer together.

### 5G Benefits to Healthcare industry – Telehealth

5G will transform healthcare. A 5G and AR/VR integrated platform will drive the adoption of telemedicine in the public and private sectors. Leveraging 5G and IoT devices, healthcare providers can monitor patients and gather data in real-time to improve personalized and preventive healthcare. Advanced healthcare capabilities, such as, remote medical diagnosis and education, and advanced paramedic service (4K video streaming and ultrasound image transmission from ambulance to doctors in car/at hospital) will become a new norm in telehealthcare.

## Looking Ahead

As 5G technology continues to evolve and become popular, 5G-powered devices are expected to become mainstream to the mass consumers when most geographical areas are covered by 5G signal.

In future, there will be more commercial applications adopting 5G technology, such as, digital infrastructure in Smart City.

Let us work together towards developing a new era of 5G.

## Mr. Kenneth Lau

Chairman of Communications Association of Hong Kong

在我擔任香港通訊業聯會主席期間，我見證了香港通訊業界最鼓動的時刻，就是香港成功邁向 5G 發展的新里程。經過多年來的基建規劃、技術及應用的測試、頻譜拍賣 / 發牌，到落實推出 5G 商用服務，香港終於開啟了 5G 新時代。

## 活出 5G 世代真體驗

在 2019 年 10 月及 11 月，通訊事務管理局辦公室（通訊辦）成功完成 5G 頻譜拍賣（包括 3.5 吉赫、4.9 吉赫及 3.3 吉赫頻帶），並由四家流動網絡營辦商成功投得，包括：中國移動香港有限公司（中國移動香港）、Hong Kong Telecommunications (HKT) Limited (HKT)、和記電話有限公司（和記）及數碼通電訊有限公司（數碼通）。

隨著四家電訊營辦商分別於 2020 年 4 月 1 日及 5 月 26 日推出 5G 服務，我們正式踏入 5G 流動通訊科技的新時代。根據畢馬威的報告，在未來六年，全球主要垂直行業在 5G 技術應用的潛在經濟價值，估計將達到 4.3 萬億美元。

## 5G 應用的前景如何？

我們一直探討 5G 應用的前景，就讓我在這裡回答這個常見問題，並闡釋 5G 對個別行業帶來的主要好處。

### 5G 對航空業的好處 -- 智慧機場

5G 成就智慧機場，智慧機場塑造了旅行體驗的未來。在優化航廈管理方面，通過融合 5G 技術與智能視頻分析解決方案，為航機提供實時閘口和停機位規劃及調配安排，提升效能。對於旅客來說，5G、人工智能 (AI) 及機械人，則可以“Guide & Go”的形式，引領旅客到達機場的各個服務點，提供更便捷的服務。

### 5G 對媒體及娛樂業的好處 -- 透過 5G 進行直播串流

藉著 5G 技術，我們可以輕鬆地在香港透過 5G 串流直播，觀賞各類受歡迎的節目，如 K-Pop 演唱會和電競比賽等；流動廣告公司亦可藉機透過收費流動內容服務和廣告支持的視頻來增加利潤。有了 5G，市場將可以提供更多更高質量和別具創意的廣告；品牌和廣告商亦可利用實時流動數據的分析，洞悉消費者行為和偏好，繼而創作個人化的廣告。

從觀眾角度而言，5G 給不同國家的觀眾帶來更暢順的直播串流，並進行實時聊天，拉近世界的距離。

### 5G 對醫療保健業的好處 -- 遠程醫療

5G 將改變醫療保健業的運作。5G 和 AR/VR 的整合平台將推動公營及私營醫療機構採用遠程醫療服務。醫療保健從業員可以藉助 5G 及 IoT 終端設備，監察病人和實時收集數據，以改善個人化及預防性的醫療照護。一些尖端的醫療保健功能，如遠程醫學診斷和教育，與及先進的輔助醫療服務（救護員可以在救護車內把 4K 視頻串流和超聲波影像，傳送至在途中或在醫院裡的醫生）將成為遠程醫療的新規範。

## 展望將來

隨著 5G 技術不斷演進和越趨普及，當大部分地域都被 5G 信號覆蓋時，可以預期由 5G 支援的終端設備將成為大眾消費者的主流。我深信，在不久的將來，將會有更多採用 5G 技術的商業應用，例如智慧城市的數碼基建。

讓我們同心協力，共同開創 5G 新世代。

## 劉貴顯先生

香港通訊業聯會主席