



OUR INNOVATION

According to the International Integrated Reporting Framework, our research and technology offering could be categorised as “Intellectual Capital”. For the purposes of our report we will refer to it as “Our Innovation”.

The Hongkong and Shanghai Hotels operates its own research and development facilities to design, build and customise technologies to better serve guests. We believe we are the only hotel group in the world with such facilities in-house. This pioneering approach in providing innovative guestroom amenities is driven by the Group’s Research and Technology Department (R&T), which celebrated its 30th anniversary in 2015.

The HSH approach to innovation offers significant value to shareholders and ensures that our company stays relevant in today’s interconnected world, where a reliance on technology has become second nature to most of our guests. This is also part of our heritage; from the time The Peninsula was conceived in 1928, HSH was determined to present “an establishment containing the most modern hotel equipment and hygienic appliances to an extent



without parallel in this part of the world”, according to the first managing director of HSH, James Taggart, speaking at the hotel’s opening in 1928. This has been the cornerstone of our approach to innovation ever since those early days.

All in-room technology used at The Peninsula Hotels is designed and developed in-house and then prototyped and tested to perfection by the R&T team of 25 electronic software and hardware engineers, who are able to respond to guests’ needs through a combination of observation, innovation and technological expertise.

Located in Aberdeen, Hong Kong, Christopher Chan, General Manager of Research and Technology, and his team of white-coated engineers strive to provide user-friendly, intuitive technology for today’s increasingly discerning and tech-savvy hotel guests. Whether visiting for business or leisure, Peninsula technologies seamlessly assist guests with their work and personalise their comfort, entertainment and connectivity in the sanctuary of their guestroom.

Bespoke in-room experiences

As guests’ expectations continue to develop at breakneck speed, the R&T team is tasked to not just keep pace with, but to lead the hospitality sector. Their aim is to deliver bespoke in-room experiences that enable guests to choose how they access, use and enjoy the hotel’s services.

The R&T team’s latest offering takes these initiatives to a new level of creativity and innovation, with a truly personalised in-room experience. The fully customised interactive digital bedside, desk and wall panels were initially introduced at The Peninsula Hong Kong in 2011. Pre-set in 11 languages, the tablets control all in-room functions with a simple touch, including the in-room compendium of restaurant menus, hotel services, the “PenCities” virtual city guide, personalised streaming terrestrial TV, Internet TV and radio, mood lighting, curtains, valet call, weather, thermostat, language and privacy options.

Connected to the tablets, the large lacquered work desk is equipped with high-speed Internet access, international Internet radio, a weather panel, and a smartphone docking station, while The Peninsula’s signature en suite marble bathrooms offer LCD touch-screen panels for terrestrial and Internet TV and radio. Mood lighting, with a customised ambient spa setting, delivers a luxurious, integrated light and sound experience for indulgent relaxation.

State-of-the-art audio-visual centres with flat-screen, LED televisions offer an enriched entertainment experience via tablet with 90 terrestrial, cable and satellite TV channels, more than 4,000 Internet radio stations and complimentary

HD movies. The entertainment system also includes an iPhone/iPad docking station, a Blu-ray player in every room, memory card reader and Sound Bar virtual surround sound speaker system. Wireless connection to personal electronic devices and to the all-in-one printer/photocopier/scanner/fax/ enables the seamless functionality of a home office, plus multiple device chargers for added convenience.

Complimentary high-speed wired and wireless Internet access and free international IDD calls via VOIP are available in all guestrooms. Free wireless access and local calls are also available when travelling in the hotel's Rolls-Royce and MINI fleet cars.

Tasked to deliver what guests want before they even know they want or need it, the R&T's twin mantras are "technology is all about people" and "you shouldn't have to think – it just happens". Every aspect must serve guests, to help them unwind and keep them connected, informed and stimulated. At its heart, the issue has always been a continual evolution of design – always asking "how does this work?" and "what can we do better?"

Since its inception in 1985, the R&T department has created, designed and developed cutting-edge in-room facilities for The Peninsula's portfolio of hotels. The team also works closely with manufacturers of off-the-shelf items, such as TVs, to re-design remote control devices to be as simple and user-friendly as possible for guests.

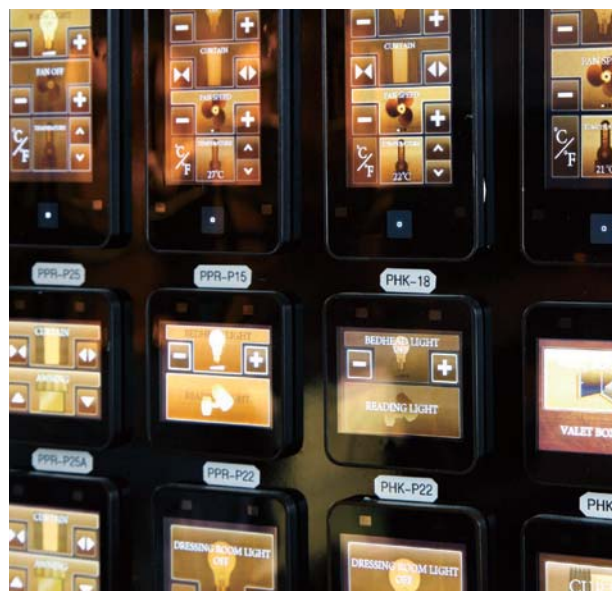
The technology design process for a new hotel starts an average of two years prior to opening. It all starts with an idea, generated by a specific need or maybe just a request from a guest that makes us think differently. We combine market trends with our long experience in the hospitality industry to offer guests a seamless service. Ideas and functions are envisioned by a committee of senior HSH executives, and are then developed and produced by the R&T team, incorporating lab prototyping and testing. The technology is installed into the sample room – a complete and fully functional room in a confidential location in Hong Kong – which is then occupied and tested by numerous Peninsula executives to perfect the design, flow and functionality of the entire space.

The inspirations for "invisible technology"

A catalyst for invention, the thought and development process comes from a variety of sources, including intense observation when travelling (in The Peninsula hotels and elsewhere), ranging from how guests move around a guestroom to staff interaction with guests in different spaces.

A scientific article on the effects of bright lights on rabbits led to extensive research on the effect of light on brainwaves, and how "invisible technology" (in-room lighting and facilities) can help guests unwind. In order to bring the conscious state to a relaxed level, fading the lights out rather than abruptly switching them off helps reduce brain waves from the usual 15 Hz to a more relaxed 10 Hz (in comparison, the REM stage of sleep is 8 Hz). Similarly, the sudden ringing of an alarm clock jolts sleepers awake, causing involuntarily muscle tensing and momentary stress, so The Peninsula alarms start gently and then ramp up the volume in order to avoid this.

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Ideas come from other sources too. The inspiration behind the bathtub telephone, first introduced at The Peninsula Hong Kong in 1994, came from a soap TV commercial featuring a couple in a bubble bath on a private jet when the husband calls the pilot to fly to Bermuda.

Telephones are a signature Peninsula feature. Unable to source an attractive and appropriate model offering the required functions, The Peninsula phone was custom-designed by the executive committee, with innovations including a rubber grip on its sides for the elderly or when hands are wet, “ripples” to grip the phone to the shoulder while talking, VOIP powered by Skype, and a hometown time and language display.

The phone also detects the voltage reversal if a call comes in, mutes the TV or radio and then turns the sound back on when hanging up.

The Peninsula’s headline innovations

The Peninsula Hotels’ in-room technological systems are proprietary, and never sold. As a result, we believe The Peninsula can lay claim to the following “firsts” – hospitality innovations created by the R&T team that are now used everywhere....

- “Smart switching” – the master switch turns all devices off, but individual freestanding lights can still be illuminated
- The celebrated Peninsula bedside tablet, which initially controlled all light switches in the room and affected how the lights worked. Latest models now control every aspect of the in-room ambience
- Weather, temperature and other climate information panel
- Hotel, destination, weather and flight information displayed on the TV screen
- Complimentary Internet – we have never charged guests for Wifi
- Internet radio – The Peninsula Shanghai offers more than 4,000 channels
- Complimentary VOIP calls
- Total in-room integration with today’s most innovative touch screen controls in 11 languages.

An innovative, sustainable future

With the technology industry moving at such speed, what lies ahead? The research and technology team is working with our internal Projects team for sustainable innovative solutions; for example to produce an improved lighting system to control energy-saving LED lighting to Peninsula design standards. As Peninsula in-room technology evolves, the hotels can save on printing materials and enjoy enhanced communication between guests and staff. Big data analysis on guest behaviour and preferences is conducted to help our research team improve the guest experience. The team is also working on further developing the Wi-fi phone which can be used in all locations in the hotel. Artificial intelligence and smart hotel rooms are a future trend that we continue to monitor carefully.

