

# Development at Overseas Offices



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## Changes in the technology attaché system

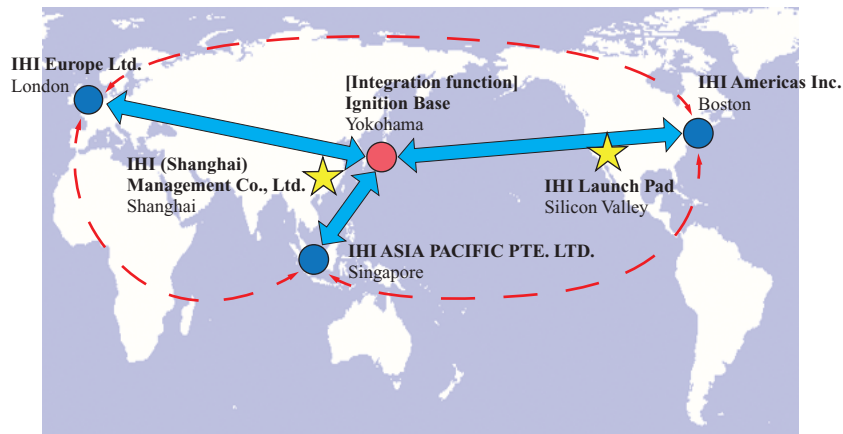
The technology attaché system started in April 2007, when IHI dispatched one research and development staff member to each overseas office in New York and London under the title of technology attaché. The purpose was to give the research and development staff overseas experience. It was largely treated as a study abroad program. Today, in addition to maintaining networks in each region, the system is now used as a way for business divisions to provide guidance and support for collaborative efforts with overseas research institutions and startup companies. In this way, the role of technology attachés is gradually changing.

A collaboration with A\*STAR (Agency for Science, Technology and Research) in Singapore began before November 2011, when the first technology attaché was sent to the country. It is easy to obtain government subsidies and conduct social experiments in Singapore, this caused people to begin to notice the possibilities of development in overseas offices to make the best use of such an environment. In October 2014, in addition to establishing an R&D function within IHI ASIA PACIFIC PTE. LTD., one full-time stationed staff member was assigned to ARTC (Advanced Remanufacturing and Technology Centre), an organization under A\*STAR. This coincided with the opening of the Tsunagu Lab. in the IHI Yokohama Office, which serves as a

base for open innovation.

It was around this time that the network began developing by making the best use of the characteristics of each region where technology attachés were dispatched, and cooperation with overseas research institutions started to become more robust. Since 2016, the search for partnerships with startups in the United States has become more extensive, leading to the relocation of the East Coast dispatch base to Boston, where many startups originating from the Massachusetts Institute of Technology are located. This occurred in June 2018. In December 2018, the IHI Launch Pad was opened in Silicon Valley on the West Coast of the United States, where development in collaboration with startups has been in full swing (“Value Creation for Our Customers Based on Collaboration Work with Startup Companies,” IHI Engineering Review, Vol. 53 No. 1). Then, in April 2019, one technology attaché was assigned to the West Coast of the United States. There are now two attachés in the United States: one on the West Coast, and one on the East Coast.

In China, a comprehensive collaboration with Tsinghua University has been ongoing since 1999 (“Collaboration with Tsinghua University in China,” IHI Engineering Review, Vol. 53 No. 1), and in April 2019, one technology attaché was formally assigned to IHI (Shanghai) Management Co., Ltd. to accelerate the development of new technologies and new businesses in China.



Deployment destinations of technology attachés and global collaboration

The history of the technology attaché goes back 13 years, and their positions and roles have changed throughout this time through repeated trial and error. From research to development, and from technology to business, the technology attachés will continue to be active around the world in collaboration with various business divisions.

### Development at overseas offices

Collaborative research with overseas universities and research institutions has been conducted in large numbers for a long time now. Among these collaborative research efforts, many were focused on further refining their own fundamental technologies. In addition, with the exception of study abroad programs, collaborative research projects have rarely been conducted at overseas offices, and have mostly been carried out through exchanges between Japan and other countries. However, since the time the first Singapore technology attaché was dispatched, more importance has been placed on accelerating development by applying external technology and knowledge to each business. As shown in the examples of the activities in the United States, the effective use of the technologies of not only universities and research institutions, but also startup companies has become important in recent years.

In order to collaborate with overseas universities, research institutions, and startup companies, and to make the most of the results of their development as quickly as possible, it is essential that the strategies and ways of thinking of the business divisions are made clear. This is where the function of the “connoisseurs of technology” in the R&D division is required. When these two factors are properly coordinated, the gears that accelerate development will begin to move. In addition, development should ideally be carried out at overseas offices that are close to the target markets. Moreover, it is important for business models to be planned by the people who are from the countries where the markets are, as they will be the most able to make accurate judgments about the best approach.

From a global perspective, it will be important to take a

holistic view of the differences in social issues, market characteristics, and customer attitudes stemming from the history and culture of each country and region, and to promote technological development and business model development utilizing local ecosystems at overseas offices that are close to the target markets. Moving forward, it will be important to maintain a global perspective that allows us to see the forest for the trees while locally advancing the development of technologies and businesses.

### Toward the future

In May 2019, the new IHI Group Yokohama Labs opened within the premises of the IHI Yokohama Office. The second floor of the labs, the Ignition Base, is a base for open innovation that shares the function of the Tsunagu Lab. At this base, the business divisions and customers, as well as the sales and R&D divisions, work together to create and collaborate on new technologies, product development, business model development, and business development. Technology & Intelligence Integration will gather knowledge from around the world, and will transcend barriers to work together with the business and sales divisions, as well as with customers to create and collaborate. I believe that as we move forward, we will see similar developments at overseas offices. We aim to continue looking at developments at overseas offices from both global and local perspectives.



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**Design** **Technology**

What the Ignition Base aims to achieve