

Development of a research seed commercialization implementation program using the Silicon Valley base of the University of Tsukuba

○Sosuke Miyoshi¹, Hiromi Matsuda², Fumihiko Uchida¹, Ward Chika¹, Junichi Kokudo¹
(University of Tsukuba¹, IBJ, Inc.²)

1. Introduction

In FY2018, the amount of joint research received from private companies at Japanese universities was 68.4 billion yen¹⁾, while in the United States it was 360.4 billion yen (2016)²⁾, and patent revenues were 5.9 billion yen and 2,562 billion yen, respectively. Furthermore, in the comparison of startup ventures last year, Japan's venture capital investment amount was 321.9 billion yen, the number of entrepreneurs was 247 companies, the United States was 14.4 trillion yen, 1080 companies, and there is a big difference in the scale between Japan and the United States.

Under this circumstance, the University of Tsukuba has established the Open Innovation Strategic Organization from 2019 to develop international human resources for open innovation, organization-to-organization collaboration with overseas universities and companies, and financing from overseas investors. Here, we report that we have newly developed a research seeds commercialization implementation program in Silicon Valley.

2. International expansion and Silicon Valley base in University of Tsukuba

The international open innovation development of the University of Tsukuba is as follows: 1) Boston / Cambridge area: CIC (Cambridge Innovation Center) Co-working space is used as a base for activities, dispatching customer needs surveys including the Boston ecosystem, 2) San Diego area: UC San Diego Entrepreneurship training at school, 3) Silicon Valley area: University of Tsukuba Silicon Valley base is set up.

In the vicinity of Silicon Valley, UC San Francisco and Stanford University, which are among the best in the United States in obtaining public research funds from the National Institutes of Health (NIH). In addition, Silicon Valley is the region that boasts the No. 1 position with a big difference from New York, which is second in the number and investment amount of venture capital investment by region in the United States. In the ranking³⁾ of the startup ecosystem of each city in the world, Silicon Valley is ranked first, followed by New York, London, Beijing and Boston. Performance (providing an ecosystem that allows start-ups to grow into globally successful companies) and experience (the number of startups that succeeded in exit) are at the highest level in the world.



順位	都市圏	投資額	順位	都市圏	投資額
1	シリコンバレー・ベイエリア	60,867百万ドル	9	オーステイン	1,457百万ドル
2	ニューヨーク	14,146百万ドル	10	デンバー	1,404百万ドル
3	ボストン	10,236百万ドル	11	フィラデルフィア	884百万ドル
4	ロサンゼルス	6,215百万ドル	12	アトランタ	79百万ドル
5	サンディエゴ	2,656百万ドル	13	マイアミ	700百万ドル
6	ワシントンDC	2,180百万ドル	14	ミネアポリス	699百万ドル
7	シアトル	2,061百万ドル	15	ヒューストン	478百万ドル
8	シカゴ	1,977百万ドル	16	ダラス	335百万ドル

University of Tsukuba U.S. bases and venture capital investment ranking by region³⁾

The University of Tsukuba's Silicon Valley base utilizes the Laboratory for Intellectual Innovation (LII), an overseas joint innovation lab of Japanese universities provided by IBJ, under a strategic comprehensive contract with IBJ, Inc. In addition, LII not only provides a venue, but also possesses highly-skilled human resources, know-how, and a multi-layered network that accumulate around Silicon Valley. We can expect to support researchers who will be the core players of intellectual innovation in commercializing research seeds related to life science, IT, big data and their composite areas. Last May, LII Forum 2019 was held in collaboration with Kanazawa University at LII, including Stanford University and local experts (university faculty, corporate managers, venture capital, patent consultants, marketing consultants, etc.).

3. Creating a high-impact entrepreneur program

Last year, the University of Tsukuba Open Innovation Strategy Organization, in collaboration with IBJ, developed a commercialization implementation program for university-originated research seeds utilizing LII, where is the University of Tsukuba Silicon Valley base. In other words, the University of Tsukuba's original High Impact Entrepreneur Program (Hi-EP) will be implemented in Silicon Valley is completely different from the conventional entrepreneur program implemented on the university campus. Conventional entrepreneurship programs were conducted for undergraduate and graduate students, regardless of their specialty, with the main purpose of 'mind setting', and commercialization after the completion of the programs was not always the goal.

Hi-EP, on the other hand, targets researchers and faculty members who already have outstanding research seeds, and LII mentors include professional human resources (university faculty, management human resources, lawyers, patent strategy consultants, marketing consultants, etc.) from organizations in specific areas (corporations, venture capital, non-profit institutions) to form a team of highly specialized experts, and provides support for startups to create new innovative businesses. In addition, we plan to maximize this program by leveraging the advantages of Silicon Valley and strengthening cooperation with local corporate venture capitals of many Japanese companies and the Consulate-General of Japan in San Francisco.

Hi-EP: High Impact Entrepreneur Program Local 7 nights 8 days

Topics: Moving Technology from Lab to Market, IP Strategy for Entrepreneurs, Development Partnership with Corporations, Governments for Startups, Business Development for Startups & Exit Strategy, Organization Structure, Incentive Scheme, Investment Theory, etc.

Lectures & Field trips: Olympus Corporation of the Americas, Carnegie Mellon Univ. Silicon Valley, Google X, Makena Capital Management, Office of Technology Licensing in Stanford Univ., Samsung NEXT, Wil, Amgen, Genentech, Corporate Venture Capitals, etc.

Lecturers; Reed Sturtevant, General Partner, The Engine (MIT)/ Fred Farina, Ph.D., Chief Innovation and Corporate Partnerships Officer General Partner, California Institute of Technology/ Kip Springfellow, former Director of Strategic Partner Relations, Singularity University/ Reiko Namikawa, MD, Ph.D., Bio-Pharma Technical & Strategic Advisory/ Howard Chao, Investor, Attorney and Counselor to entrepreneurs/ Linda Judge, IP and Commercial Contracts Attorney, Experts Board Member/ Gordon Wilson, CEO, Rain Neuromorphics Inc., etc.

4. Summary and future challenges

The University of Tsukuba was adopted by the Ministry of Education, Culture, Sports, Science and Technology as the "Open Innovation Development Project" in 2019 and has established the Open Innovation Strategy Organization. Hi-EP has been developed at the University of Tsukuba Silicon Valley base, LII, focusing on the biotechnology field where initial investment is large and it takes time to return money, and it is for the purpose of implementing excellent research seed commercialization that is competitive with the world.

Unfortunately, Hi-EP was scheduled to start operation in March 2020, but it was postponed due to the influence of the new coronavirus, Covid-19. We hope that the program will be executed after the situation is resolved.

References

- 1) 文部科学省, 平成 30 年度 大学等における産学連携等実施状況について
- 2) 文部科学省 科学技術・学術政策研究所、科学技術指標 2019、調査資料-283
- 3) US Startup Outlook 2019, Silicon Valley Bank, PwC/CB Insights MoneyTree™ Report