Final Report: Joint Webinar Series on India Japan Innovation Potentials on Technology,

Culture, and Development





**Organized by:** 





India Japan Laboratory (IJL), Keio University Shonan Fujisawa Campus, Japan



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India Japan Laboratory

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Rakuten



# Technology, Culture and Development

**Organized by Keio University India Japan Laboratory** (Keio-IJL) in cooperation with Rakuten Inc.

# Core Professors and Experts

- Jun Murai, Keio University, Japan
- Rajib Shaw, Keio University, Japan
- Yukio Takeyari, Former Sony India Software Centre, Japan
- Tsubasa Shiraishi, Rakuten Inc.
- Kotaro Kataoka, Indian Institute of Technology (IIT Hyderabad), India
- Kaz Ohashi, The Yoga Organization of Japan
- Ashutosh Singh, Rakuten Inc. & Patanjali Japan Foundation, Japan
- Anjula Gurtoo, Indian Institute of Science, Bengaluru, India
- Ranit Chatterjee, Co-founder, RIKA India Pvt Ltd

# **Core Team Members**

- Rajib Shaw, Keio University, Japan (Director, India Japan Laboratory)
- Vibhas Sukhwani, PhD Student, Keio University, Japan
- Yuka Shori, PhD Student, Keio University, Japan
- Akiko Kato, PhD Student, Keio University, Japan





# About the Joint Webinar Series on India Japan Innovation Potentials on Technology, Culture, and Development

Keio University established India Japan Laboratory (IJL) with an aim to enhance education, research, innovation and entrepreneurship potentials between India and Japan, especially targeting students and young professionals in both countries. Since its establishment, IJL has been engaged in a wide range of activities aimed at addressing, analyzing, learning, and nurturing the issues related to India and Japan and beyond, and working to make it more relevant to the global communities.

Rakuten is a Japanese electronic commerce and online retailing company. Rakuten formed its largest development center outside Japan in Bengaluru, India, and is a rapidly growing entity. It also has Rakuten Institute of Technology, located in Bengaluru, India. Due to the great potential of innovation in the India Japan bilateral cooperation, Keio IJL and Rakuten decided to work closely toward enhancement of young talents in both the countries to drive innovation to achieve sustainable development goals. Keeping this in mind, an open webinar series was planned in close cooperation with Rakuten, Inc. to cover three important pillars of bilateral cooperation: 1) Technology, 2) Culture and 3) Development. Addressing these three issues, a total of three webinars were conducted in this series with experts from India and Japan. The duration of each of these webinars was between 60 to 90 minutes, which included the presentation and discussions. The specific details are highlighted below:

# Webinar 1: India-Japan innovation (25<sup>th</sup> November 2020)

Session Moderator: Prof. Rajib Shaw

Speakers: Jun Murai (Keio University); Yukio Takeyari (Former Sony India Software Centre); Tsubasa Shiraishi (Rakuten Inc.); Kotaro Kataoka (IIT-H); Rajib Shaw (Keio Univ.)

# Webinar 2: Healthy urban lifestyle (16th December 2020)

Session Moderator: Ms. Yuka Shori Speakers: Kaz Ohashi (The Yoga Organization of Japan); Akiko Kato (Keio Univ.); Ashutosh Singh (Rakuten Inc. & Patanjali Japan Foundation); Rajib Shaw (Keio Univ.)

# Webinar 3: Sustainable Development (29th January 2021)

Session Moderator: Prof. Anjula Gurtoo

Speakers: Rajib Shaw (Keio Univ.); Anjula Gurtoo (Indian Institute of Science, Bengaluru) Presenters: Finalists of Social Innovation Challenge (organized by Keio IJL and IISc) on four key themes: water management, healthcare, gender equity & inclusion and urbanization.

# Target audience:

The webinar series targeted a diverse audience from India, Japan, and globally, including the university students, young professional and practitioners, researchers in the related field and professionals from development agencies. More than 190 registrations were received for the three-webinar series.





# Overview of 1st Webinar: India – Japan innovation

Date & Time: Nov 25th WED- 15:30 - 16:30 JST / 12.00 - 13.00 IST

#### Key Speakers:

- 1. Jun Murai (Keio University)
- 2. Yukio Takeyari (Former Sony India Software Centre)
- 3. Tsubasa Shiraishi (Rakuten Inc.)
- 4. Kotaro Kataoka (Indian Institute of Technology (IIT) Hyderabad)
- 5. Rajib Shaw (Keio University)







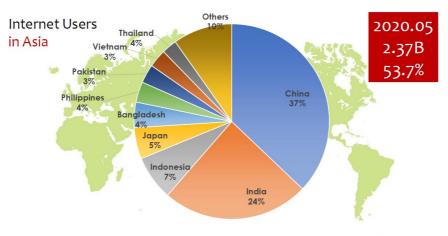
# Overview of 1st Webinar: India – Japan innovation

# Opening Remarks by Prof. Rajib Shaw

After extending a warm welcome to all participants, Prof. Shaw started the session by introducing the recently established 'India Japan Laboratory' in Keio University, and its ongoing activities. While the COVID-19 pandemic has currently restricted the IJL activities to online mode, Prof. Shaw reiterated that there are ongoing plans to extend the scope to on-field research activities in collaboration with a range of stakeholders.

# Presentation by Prof. Jun Murai: Internet for Digital Transformation

Sharing their experiences of the ongoing COVID-19 pandemic, Prof. Murai talked about the changing human behaviour within a family due to work from home culture, changes in educational system, etc. Recalling the initial stages of internet infrastructure development, Prof. Murai explained how the digital society has evolved and transformed. Specifically, after the onset of COVID-19 pandemic, 20 years of digital transformation has perceivably been witnessed within 11 months. Prof. Murai then discussed the digital context of India and its future potential. Acknowledging the huge base of internet users, and the initiatives like Aadhaar and UPI, the huge potential of technological advancements in India was highlighted.



Internet World Stat: http://www.internetworldstats.com Internet Users as of May 31, 2020

# Presentation by Dr. Kotaro Kataoka: Exploring Hints for Indo-Japan Tech Collaboration

By sharing their experiences in India, Dr. Kataoka precisely talked about the several different meanings of 'Yes' in India and Japan, which appears to rely on different factors of accountability, responsibility, flexibility, etc. Emphasizing on the need for "co-creation" of innovation, Dr. Kataoka emphasized on knowing the difference and diversity of these countries, and then bringing together the good parts from their

Know "Difference" and "Diversity". Bring the good parts from Japanese and Indian ways of thinking and collaborate! お互いの違いや多様性を知り、 インドと日本の考え方や行動の 「いいとこ取り」をする

way of thinking and collaborations. Dr. Kataoka also put forward specific suggestions for the Indian and Japanese talents for engaging in collaborative action. As a field of collaboration, the different way of handling of medical records in India and Japan was discussed, alongside the example of PACEX, and other ways forward.





# Presentation by Mr. Yukio Takeyari: Indian IT Industry and Innovation

At the outset, Mr. Takeyari talked about their experience of working in India and the relevance of their publication titled 'India Shift: Why are the world's top companies establishing R&D centres in Bangalore?' Highlighting the progressive growth in Indian IT-BPM revenues, and the country-wise share R&D centres in India, Mr. Takeyari underlined that India is now the 3<sup>rd</sup> largest start-up ecosystem in the world. Behind the rapidly evolving IT industry in India, the key points were highlighted to be diversity and jugaad spirit in India (Power to manage somehow/ Everything is possible/ Never give up). Lastly, some of the recent initiatives of India and Japan collaboration (like Japan India Startup hub and Japan India Digital Partnership) were underlined.





# Presentation by Mr. Tsubasa Shiraishi: Why Rakuten is focusing on India?

After illustrating the global profile of Rakuten, Mr. Tsubasa highlighted the accelerating mobile customer acquisition. Of the many Rakuten TECH Global Hubs around the world, the India Technology Division is situated in Bangalore with 1000+staff members. Targeting to increase the staff size to more than 2000, Mr. Tsubasa underlined that the Jugaad spirit (like Omotenashi) in India is very much appreciated and is key to innovation. The various activities of Rakuten India, including Hackathons, Media Hackfest, Conferences, etc. were then summarized. Towards, the end, RAKUTEN SHUGI-Rakuten's principles for SUCCESS were explained.



# Q&A Session

- What is the way forward for India-Japan collaboration in next five years? -It will be important to enhance the collaboration efficiency and addressing the language barriers.
- What is the potential for job opportunities in Japan, or in Rakuten specifically? *Rakuten is very much open to welcome the Indian and Japanese talents, provided they possess the required skills.*
- Are there any opportunities for Indian students to engage with India Japan Laboratory? -A range of such pathways are being chalked out to enhance the student exchange in the post-pandemic times.





# Overview of 2nd Webinar: Healthy Urban Lifestyle

Date & Time: Dec 16th WED- 15:30 - 16:30 JST / 12.00 - 13.00 IST

#### Key Speakers:

- 1. Kaz Ohashi (The Yoga Organization of Japan)
- 2. Ashutosh Singh (Rakuten Inc. & Patanjali Japan Foundation)
- 3. Akiko Kato (Keio University)
- 4. Rajib Shaw (Keio University)





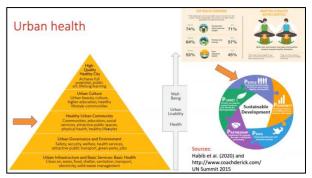


# Overview of 2nd Webinar: Healthy Urban Lifestyle

# Opening Remarks by Prof. Rajib Shaw

Prof. Shaw started the session by providing a brief overview of India Japan Laboratory (IJL), that is recently established at Keio University. It was highlighted that IJL has three main components: 1) Environment, Development, Economics, Disaster Risk Reduction, and Climate Change, 2) Existing Technology and Emerging Technologies, 3) Culture. Due to COVID-19, face-to-face activities have been limited so far, but IJL has actively engaged in online activities such as Hackathons, web symposiums, and online lectures. Recently the IJL website (https://indiajapanlab.org/) has been launched, wherein all the

related information is shared. Prof. Shaw also introduced the main theme of the webinar "Urban lifestyle". As the rural population is progressively shifting towards urban areas, the 21st Century is projected to be an Urban Millennium. Due to this growing concentration of population, urban areas are projected to experience growing impacts of climate change in terms of hotter days and stronger typhoons, which will add to the existing concerns of urban livability and wellbeing like weight gain, fatigue, etc.



# Presentation by Mr. Ashutosh Singh: Healthy Urban Lifestyle

Mr. Ashutosh firstly talked about different issues associated with urban lifestyle (such as high cost of living, great competition, heavy traffic, lack of time, less personal space, and poor health routine, etc) and its effects on the human body. Especially during the ongoing COVID-19 pandemic situation and changing routines, many people are reported to be suffering from physical and mental problems such as less exercise, less sunlight, and a vicious cycle of daily life. In that regard, Mr. Ashutosh suggested

an ideal cycle of routine that should be followed to improve productivity, by breaking the vicious cycle of daily routine, having time for self-introspection, making room for themselves, and charging up the body and mind. Further, Mr. Ashutosh highlighted that Rakuten has provided their employees with daily exercise and meditation to help bring a calm mind and active body. Their special program aims to achieve zero stress, zero suicide in society with the vision of a "better lifestyle" and a policy of "unite and grow".

# Presentation by Mr. Kazuaki Ohashi: The Great Yoga in Japan

Mr. Kazuaki first discussed about the history of Yoga and its effects in Japan, followed by the Japanese Yoga history, and its link with Buddhism. Although Indian Culture and yoga are very popular in Japan, Mr. Kazuaki underlined that there are quite few people who know authentic yoga, and limited emphasis has been put so far on Yoga in the academic field. In that regard, the Yoga Organization of Japan has conducted several promotional activities in coordination with the Indian Ministry of Ayush like with the







Parliamentary league, Kanagawa prefecture, Buddhist temples, Maritime Self Defense Forces, educational institutes, and groups of handicapped and elder people.

In addition, the International Day of Yoga (June 21) is now being celebrated at prominent places like Tokyo Skytree in Japan. Since 'Tanegashima' was registered as the first sacred place of Yoga in Japan, Yoga organization has also conducted activities such as promotions of yoga and ayurvedic products to support healthy life as well as sustainable tourism, disaster prevention, health, and safe cities. As a way forward, the Yoga Organization will work with IJL to study more about the application of yoga in disaster prevention and to train the lungs regularly with a breathing exercise.

# Yoga demonstration session by Ms. Akiko Kato

To demonstrate the positive impacts of Yoga on human body, Ms. Akiko conducted a 10 minute online yoga and meditation session, which was also supported by Mr. Singh.

# Q&A Session

Is there any certain order to conduct pranayama (a way of breathing)? -Hati yoga has a specific order but it also depends on several other factors like the seasons, type of body, the condition of the body. Other things can be customized.

How can I explain spirituality yoga such as super soul, or the goal of yoga? Do you have any idea or advice to explain that? - It is one of the common discussions on International Yoga Day. Spirituality is different in different religions, and yoga learners can consider that they can accept the yoga and yoga instructors apart from the spirituality. Also, philosophy is different in different institutes. It is still very difficult to standardize it.

Comment: There are variances to pronounce 'yoga' or 'yooga', 'nada Yoga' or 'naada Yoga'. There is also a different type of yoga, 'nada yoga' (ancient metaphysical system) as well as Hatha yoga. Yoga has a different aspect like art (similar to Japanese arts 'Xdo' such as Sho-do (calligraphy), Ka-do (flower arrangement), Bu-do (martial arts), etc.)

Why the number of suicides is quite big in Japan? - People in many companies have vicious cycles, and the lack of self-introspection could be a likely reason for it. For easing the stressful life in Japan, Yoga can be a strong solution, and we are planning to expand our activities in that context.

# Closing Remarks by Prof. Rajib Shaw

There are many ongoing discussions related to urban lifestyle and wellbeing, and it is highly relevant to study the potential role of Yoga in enhancing the same. IJL Keio University could be a good platform for different stakeholders to engage in collaborative evidence based actions.







# Overview of 3rd Webinar: Sustainable Development

Date & Time: Jan 29th FRI- 17:30 - 18:30 JST / 14.00 - 15.00 IST

#### Key Speakers:

- 1. Rajib Shaw (Keio University)
- 2. Anjula Gurtoo (Indian Institute of Science, Bengaluru)







# Overview of 3rd Webinar: Sustainable Development

# Opening Remarks by Prof. Rajib Shaw

The year 2020 has put forward serious concerns for the human societies around the world, and it showed how a small micro-organism (coronavirus) has impacted the global economy. Hampering the progress of global policy agreements such as the Sustainable Development Goals and the Paris Agreement, the ongoing pandemic has caused a massive setback, Several reports (like the World Economic Forum) have documented the wide-ranging impacts of this crisis, and it is apparent that both the developed and developing countries are affected. There is thus a genuine need for identifying solutions for social innovation that can help address the current problems. In that regard, the Social Innovation Challenge (SIC) 2020 was jointly organized by the Keio University India Japan Laboratory and IISC Bangalore, and a 'call for social innovation ideas' was launched under four themes.

# Details of SIC and Announcement of Winners by Prof. Anjula Gurtoo

The SIC 2020 challenge was jointly organized by the Keio University IJL in collaboration with the IISC Bangalore (Center for Society and Policy). The SIC 'Call for innovative solutions' (under four key themes) was launched in November 2020, and the information was circulated to more than 900 institutions across India. Prof. Gurtoo reported that around 550 teams had registered for this event in Stage 1, and around 175 proposals and proof of concepts were submitted for consideration in further stages. After a thorough evaluation of all the submitted ideas, the Top 3 winners under each of the four themes have been identified, and five other ideas under each category have been selected for 'Certificate of Excellence'. The criteria of evaluation, and the evaluators from India and Japan side were then described in detail. After describing all the details, Prof. Gurtoo announced the names of Winners from all four categories, and the teams who are shortlisted to receive the Certificates. Thereafter, the first ranked Team from each of the four categories was invited to make a presentation of 5 minutes.

# Presentation by Mr. Krishna Gilda (Gender Equity & Inclusion: Aasha- A new hope)

Mr. Krishna first established the background of gender inequity that currently persists in the society, and the specific difficulties faced by women in terms of menstruation, etc. It was highlighted that 80% of women don't have access to basic sanitary products, and there is a need to empower women. Menstrual cups serve to bridge these gaps ideally and also help to mitigate other problems like waste management and decomposition (of sanitary pads, etc.). However, there has been limited adoption of these cost-effective and longlasting products due to lack of awareness and penetration-related stigma. Our idea 'Aasha' encourages the adoption of menstrual cups by helping to safely fold and penetrate the vagina with ease. With its



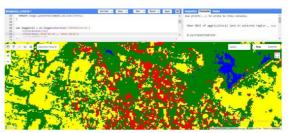
ergonomic design, Aasha can be used with all types of menstrual cups, and also a dilator to flex the viginal muscles. A proof of concept video was shown towards the end.





# Presentation by Mr. Sai Bhargav Reddy V. (Water Management: Biomass Logic- S)

Mr. Sai first established a background of the agriculture sector in India, and its importance for Indian economy. It was pointed that 60% of Indian population directly or indirectly depends on agriculture for livelihoods, whereas the same is 70% in rural areas (wherein there is limited awareness of advancements in agriculture). After explaining the features and limitations of the current techniques of yield forecasting, like through experts, regression models, etc., Mr. Sai underlined that their idea 'Biomass Logic S' suggests more efficient alternative ways for crop surveying and yield prediction as well as estimation with satellite remote sensing. After defining the key terms used in the model, the five steps of the proposed idea were explained: Step-Deriving LAI (Leaf Area Index), Biomass, Yield through crop simulations; Step 2- Generating Normalised Difference Vegetative Index for respective LAI; Step 3Paddy Yield Estimation Using Multi-spectral Remote Sensing



Classified into 4 different classes



Greenest pixel composite

Training ML model; Step 4- Running Model in GEE code editor, and Step 5- Crossvalidation of model in Nalgonda, Telangana. Lastly, the actual functioning of the model and various statistical findings were shown.

# Presentation by Mr. Aviral Kumar Goel (Healthcare: TeamVisio: Vision Reimagined)

In reference to a report by WHO, Mr. Aviral highlighted that around 285 million people suffer from vision impairments globally and about 39 million are blind. India is home to 15 million of those blind people, which is the largest for any single country. In that regard, Team Visio is working on a voice-enabled, assistive smartstick for blind people, helping them navigate independently. After describing the features of existing solutions, Mr. Aviral presented the UI/UX design of their app and a proof of concept video of their app that shows a blind folded person navigating, as the app helps to scan the surroundings, and makes the user aware of the obstacles present in their path. Highlighting the novel features of the idea, Mr. Aviral explained that they plan to add additional features (like distance estimation) to their app before taking it forward towards market launch. Lastly, another short video from Government Hospital in Delhi was shown to reflect the medical opinion for the app and live customer feedback.



Presentation by Mr. Ahmer Bashir Shah (Urbanization: Instant conversion of human hair wastes from salons and chicken poultry wastes into NPK, amino acids and micronutrient rich novel organic liquid fertilizer for ready to use in agriculture)

After introducing their team, Mr. Ahmer briefly touched upon the pitch theme and their plan of operation. For their specific focus area of Srinagar city, it was explained that





there is no proper waste management plan for human hair waste from salons, poultry feather waste, and food wastes from kitchens, local vendors, mandis. Over this problem statement, the idea of waste conversion to fertilizers was explained, supported with value proposition, proof of concept, business model canvas, workplan flow, competitive analysis, etc. For the USPs of the proposed idea, Mr. Ahmer pointed that it contributes for both 'Swatch Bharat' and 'Atma Nirbhar' Abhiyan, alongside providing several other environmental benefits. lt also demonstrates a huge social impact as more than



3500 kgs of waste was treated in 1st year. Before the closing statement, the market going strategy and set milestones were also briefly explained.

#### Comments from the evaluators

1. Prof. Inder S. Gopal, IISc Bangalore

The idea of Mr. Krishna and team is nicely conceived, is very novel and can create a significant impact. Mr. Sai Bhargav's work also reflects deep involvement of the team, and their video demonstration of the idea is fascinating. The prototype of Mr. Aviral's team demonstrates very high potential and can contribute towards achieving inclusivity. Mr. Ahmer's team has also came up with a great idea of high significance, though more relevant for rural areas, and less for urban.

2. Mr. Yukio Takeyari, Former Managing Director, Sony India Software Centre Pvt. Ltd

After extending their congratulatory wishes to all the winners, Mr. Yukio emphasized that he was highly impressed by the social innovation ideas submitted as part of SIC 2020. Mr. Yukio highlighted that these solutions covered a variety of social issues, and there is now a need for the youth populations to take these ideas forward through entrepreneurship for addressing the social issues locally and globally.

3. Dr. Ranit Chatterjee, Graduate school of Informatics, Kyoto University, Japan

It was a very challenging to evaluate the SIC ideas, as they were all very good. For the winners, Mr. Krishna's idea is a very simple solution, but it has high scalability and business potential as it supports other existing products (menstrual cups). Mr. Sai Bhargav's idea is also interesting and has huge scope beyond the paddy crops. Mr. Aviral's team has come up with a simple idea, that is aligned with the objectives of the The New Urban Agenda. Mr. Ahmer's idea related to waste management is radical and the business concept is very precise, both of which are important for market success. Moreover, other participants should not loose heart and should continue innovating to look for new opportunities.



