



January 2013

A visit to Nishijima Corporation, a company known for not having retirement system: Group photo with President Nishijima

Message from the Director and Dean

Solving Problems with the “Systemic x Systematic” Approach

A Happy New Year! Keio SDM’s catch-word for this year is “system.” As we mainly featured “design” last year, we will go back to the basics and focus on “system” this year. A system is something that is created from relationships between elements. Anything that contains interactions, from technological interactions to social and human interactions, is a system. At Keio SDM we place emphasis on “systems approach” which is based upon systems engineering. There are two meanings to the systems approach: one is systemic approach; and the other is systematic approach. The former urges us to take a panoramic view of things as a system; while the latter guides us to decompose and integrate things logically. Keio SDM utilizes both of these approaches so as to pursue innovative design and sustainable management. Our mission is to nurture human resources who understand the systems approach, to conduct practical research concerning the basics and applications of SDM Studies, and to solve problems for social change by collaborating with different entities on various levels. We will continue our endeavor to create a better world this year. Your continued guidance and support are greatly appreciated.

The SDM News will feature messages from the faculty on the first page again this year. Twelve supervising Professors/Associate Professors will take turns expressing their thoughts concerning Keio SDM. Our journey will continue this year with a view to solving problems based on the systems approach for betterment of society. Please count on us!



Takashi Maeno, Director, SDM Research Institute
Dean, Graduate School of System Design and Management



Group photo of twelve SDM supervising professors

News

TOPIC 1

A Visit to Nishijima Corporation on Nov 12: A Company with No Retirement System

Students accompanied by Guest Professor Atsuo Yoshida and Associate Professor Tetsuya Toma visited Nishijima Corporation in Aichi prefecture as a part of the Management and Financial Strategy class on November 12. They had the opportunity to tour the factory and exchange ideas with the company's president. Nishijima Corporation manufactures machine tools for automobile companies; and their production is integrated, from design to delivery. They are one of the few companies in Japan that do not have a retirement system. Indeed, the company's motto is, "Be Energetic and Active Forever!" Keio SDM visits Nishijima Corporation every year as a part of the Management and Financial Strategy class. This was the fourth year, with a record number of thirty-four participating students. Students witnessed the work place filled with enthusiastic employees who continue to play active roles without regard to their ages. Some of them have



Students being briefed by senior staff with more than sixty years of continuous working experience

been working continuously for more than sixty years; and the most senior employee is seventy-eight years old! The visit provided a valuable opportunity for students to rethink the issue of employment and the labor force in Japan, where the aging population is a prominent issue. It has become almost a ritual for Keio SDM

visitors to stop by the company's cafeteria and participate in the curry & rice eating contest. The target set by President Nishijima was three plates or more. Nineteen of the participating students made honorable mention by achieving this target, finishing off all the streamed rice prepared by the cafeteria that day.

TOPIC 2

The Sixth Information Session of Keio SDM



Tour of the laboratory facility

Keio SDM held an information session in CDF Room on the third floor of the

Collaboration Complex on Hiyoshi Campus at 13:00 on Saturday, December 8. It was the sixth session held this year and was conducted in two parts. Keio SDM's curriculum and faculty were introduced during the first part of the session. During this session two current students, Nobuyuki Kobayashi and Hideki Kimura, spoke about their experiences, including their motives for joining Keio SDM, their research activities, and their student life. The lively stories of the current students held the audience's attention. In the second part participants were divided into smaller groups. They watched a video demonstration entitled "4K3D film" and a video from the communication with Astronaut Hoshide on the ISS, which was recorded in November. The groups then toured the laboratory facilities, such as CAVE, with

the help of laboratories represented by Professor Ogi and Associate Professor Toma. Participants also observed a workshop on "Policy Design."

Finally they were invited to visit the poster displays in the hallway and main conference room of the sixth floor of the Collaboration Complex, which introduce various activities of the different laboratories. Booths were set up in the laboratory and conference rooms for individual consultation by faculty members and current students. The session was very popular, attracting more than fifty participants who were keenly interested in learning about Keio SDM more in-depth. It gave them a valuable opportunity to directly communicate with faculty and students about research areas and student life.

TOPIC 3

A Visit to Toei Animation Co., Ltd.

On Monday, December 3, students visited the headquarters of Toei Animation Co., Ltd. located in Tokyo Oizumi as a part of Management and Financial Strategy class. Students were accompanied by SDM's Guest Professor Yoshida, who served for many years as Outside Director and Special Advisor of the firm. Students observed the production of Japanese animation, which is known for leading the "Cool Japan" phenomenon. Toei Animation is the only listed Japanese company in the industry. It has been successfully producing a string of animated hits for more than sixty years, such as Dragon Ball and One Piece. The company is also known for many talented professionals, including Hayao Miyazaki.

Production of one animation requires twelve steps of detailed work, from planning, creation of motion pictures, coloring, and filming, to recording and editing. Students were invited to observe the

production sites of these different steps and learned the rigorous nature of animation production. Students were also given the chance to exchange ideas with the

company's senior production staff about management in the animation business. The tour was concluded by visiting the company's gallery.



Group photo in front of the life-sized "Precure (popular animation)" dolls displayed in the gallery

TOPIC 4

The First Future Design Conference

Keio SDM hosted the first Future Design Conference on the third floor of the Collaboration Complex on December 15. The objective of the conference is to create a platform where concrete ideas concerning designs of the future can be discussed. Mr. Tomoharu Inoue (CEO of Inoue Business Consultants Inc.) and Yuriko Sawatani (Japan Science and Technology Agency Fellow) were invited as judges. Eight proposals, which were selected from more than fifty, were presented; and business and social design proposals were discussed. The proposals were made on: “Project to Eliminate Darkness from the World in Eight Years,” “TransFan♪System,” “Locker That Links Self-Help and Public-Help,” “Baton: Learning Ground that Leads to the Future,” “Parenting Home,” “Etiquette Book: How to Become a Happy Grandma,” “Future Nursing-Care System: *Kaigo-raku* (everyone, protected, and fun/comfort/happiness),” and “Promotion of *Kojo* (factory) Girls (KG) Platform.” The Award of Excellence

(participants’ votes) was granted to the “Parenting Home.” The Judges’ Special Award and the Dean’s Award went to the “Baton: Learning Ground That Leads to the Future” and the “Promotion of *Kojo*

Girls (KG) Platform” respectively. Keio SDM will continue its effort to transmit world-changing ideas to a wider society.



Guest Professor Yasui serving as main host



Presentation



Mr. Satoshi Akiyama receiving the Award of Excellence

TOPIC 5

Experiment of High-Definition Medical Video at School of Medicine on December 17-18

The Communication Design Laboratory represented by Associate Professor Tetsuya Toma demonstrated the use of high-definition video for medical education and telemedicine on Shinanomachi Campus for two days on December 17-18. The audience included the faculty, students, doctors, and nurses. The purpose of the demonstration was to appeal to the School of Medicine to utilize state-of-the-art high-definition video technology, such as large-screen 3D and super high-definition 4K. The high point of the event was the demonstration of the real-time medical examination of a patient. The patient was examined using the screened live video captured by the super high-definition 4K camera (having a pixel count of four times that of Hi-Vision video). The transmission of the uncompressed 4K video was successful without delay, owing to the cooperation of ASTRODESIGN, Inc. (camera manufacturer) and to the world’s fastest



Participant from the School of Medicine commenting on the 4K video (right) as compared to the High-Vision (left)

plastic optical fiber developed by the Keio Photonics Research Institute (KPRI) affiliated with Keio University’s Faculty and Graduate School of Science and Technology, for which Associate Professor Toma

serves as Vice Director. Through this experiment valuable feedback and comments were gathered from the participants concerning the possibilities and potential of telemedicine using high-definition video.

Laboratory / Center profile

Entrepreneur Laboratory

<http://lab.sdm.keio.ac.jp/el/Aboutus/aboutus.html> (in Japanese)

Representative: Takashi Maeno maeno@sdm.keio.ac.jp

Members: Professor Shinichiro Haruyama, Associate Professor Seiko Shirasaka, Guest Professor Toshiyuki Yasui, Project Associate Professor Nobuaki Minato, and others

Every year more than ten business owners and managers study at Keio SDM. In addition a sizeable number of students aspire to start up companies or establish new businesses within existing companies. This fact inspired a group of students

and faculty to come together and create a platform for entrepreneurship by utilizing Keio SDM's methodologies and methods. The establishment of the Entrepreneur Laboratory came to life in summer 2012.

Activities

- systematize entrepreneurship design and contribute to a new course, "Entrepreneurship Design," which will be launched starting from the academic year 2013
- gain practical knowledge and tips about entrepreneurship by organizing sessions to learn from the experiences of entrepreneurs and business managers
- organize sessions to brush up different business ideas using SDM's methodologies, such as system thinking and design thinking
- organize sessions covering the basic knowledge essential for entrepreneurs (e.g., management, accounting, innovation) (This year we had a session on "Business Model Generation" by Associate Professor Minato.)
- co-host the Future Design Conference
- conduct discussions, information exchanges, and joint research concerning entrepreneurship and starting up of new businesses



Laboratory in action

The laboratory has been very active, as can be seen by the fact noted above that a new course, "Entrepreneurship Design," will be launched beginning from the academic year 2013. We welcome anyone who is interested. Come and join us!

Advanced City Design Laboratory

Representative: Masaru Nakano nakano@sdm.keio.ac.jp

Members: Professor Shoichi Sasaki, Project Associate Professor Nobuaki Minato, Project Lecturer Tomomi Nonaka, and others

Objective

There is an increasing call for a concept creation related to sustainable cities as we face critical issues, such as Japan's falling birth rate and the aging population, natural disasters, as represented by the Great East Japan Earthquake, and the global boom of building environmental cities. This laboratory studies comprehensive methodologies related to policy evaluation and thereby makes policy recommendations.

Methodology

The Advanced City Design Laboratory conducts research into comprehensive methodologies with a view to: (1) visualizing issues faced by cities, such as natural disasters and aging society; (2) setting targets; and (3) making concrete proposals, such as recommendations on policies and infrastructures (see figure below). We ensure that recommended measures are evaluated from the three key perspectives: environment, economy, and society. This, we believe, allows stakeholders to have fruitful discussion on basic concepts for the localized city design. The key to consensus building among various stakeholders is the problem analysis and the quantitative evaluation of policies, the quantitative analysis of multiple policies based on multiple scenarios. For the quantitative evaluation we use: system dynamics, multi-agent simulation, population dynamics, life-cycle assessment, input-output analysis of inter-industry relationships, General Equilibrium Model, and game theory.

Research Themes

The Advanced City Design Laboratory has thus far conducted research on the following themes:

- (1) Design for sustainable redevelopment of new towns developed in the suburbs of metropolitan areas during the Japanese post-war economic miracle, such as Tama New Town
- (2) Redevelopment policy for concentration areas, such as Suginami and Arakawa wards of Tokyo, where wooden buildings mushroomed during the chaotic periods following the Great Kanto Earthquake and the War
- (3) Attractiveness analysis of advanced regional cities, such as Toyama and Kitakyushu
- (4) Sustainability assessment for the redevelopment of large cities' high-rise areas, such as Yokohama and Nihombashi
- (5) Reconstruction and city planning for the affected areas in Tohoku

Activities

The laboratory collaborates with partner companies to generate active discussions concerning advanced cities. We hold seminar almost every month to discuss methodology and organize field visits and on-site interviews (see pictures below). The laboratory's work goes beyond Japan: We have received joint research proposals from overseas including a European university.

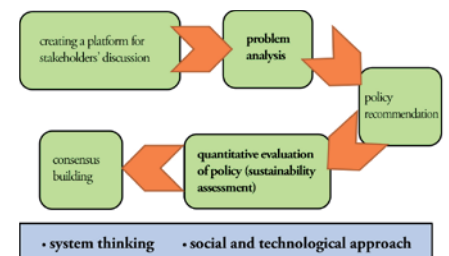


Figure: Comprehensive methodology for advanced city design



Field visits (Toyama city, Kitakyushu city, and Ishinomaki city)



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