



The Time Management Special Course to master the "8 skills to shorten delivery time": an exercise to learn the method

## Message from the Faculty

### Is prevailing orthodoxy true?



Qualitative theory which overturns the prevailing orthodoxy is receiving attention particularly in the study of business administration. The common belief that swans are white was reversed when black swans were discovered in Australia. Based on such history, a book was published entitled, *Finding a Black Swan in Management: A Guide Book of Case Study*. Prevailing orthodoxy is also not always true when it comes to economic and social systems. For example, the prevailing orthodoxy that a weaker yen will promote exports of Japanese manufacturing companies and will eventually improve the Japanese economy is coming under scrutiny nowadays. We may need to rethink the prevailing negative views on higher tax rates, stronger currency, higher salary levels, higher interests and fewer working hours, while re-visiting our positive views on local

production and a merit system. It seems that Denmark and Finland are advancing thanks to their solid social security system backed by high tax rates, while Switzerland's economy continues to grow by securing knowledgeable, skilled human resources backed by high salary levels as its currency has stayed strong. According to the World Economic Outlook Database, GDP per capita of the above-mentioned countries was higher than that of Japan in 2013: Switzerland was 4<sup>th</sup>, Denmark was 6<sup>th</sup> and Finland was 14<sup>th</sup>, while Japan was 24<sup>th</sup>. Needless to say, whether or not higher GDP per capita reflects the level of happiness is subject to discussion. Nevertheless, it is probably difficult for Japan to secure young and excellent human resources who have international minds from global markets, given the oppressive working conditions and low salary levels.

At Keio SDM we are developing a management education program which integrates design games and business games (serious games). This year we have been organizing related classes and seminars for Keio students together with the Massachusetts Institute of Technology (MIT) and the Swiss Federal Institute of Technology (ETH). Many exchange students also attend the classes and seminars as they are conducted in English, creating a platform for international education. In the future, we plan to expand the educational program so that it can also cater to working professionals. In so doing, we plan to introduce idea generation which enables participants to learn to reverse common beliefs as mentioned above. We will also utilize serious games so that participants can learn while having fun in groups.

Masaru Nakano, Professor  
Graduate School of System Design and Management

## News

### TOPIC 1 The Second Seminar on Agriculture, Rural Areas and Local Revitalization ends on a high note



The seminar was well received.

The AGRI (Agricultural) Laboratory and the Regional Development and Vitalization Laboratory of the SDM Research Institute held the Second Seminar on Agriculture, Rural Areas and Local Revitalization at the

Independence Wing of the Hiyoshi Campus on Tuesday, September 30, 2014. Oversubscribed with more than 100 researchers and local revitalization promoters from different parts of Japan, the seminar was a hubbub of excitement. On this occasion the theme was "Interactive Revitalization: Effective Branding of Locality". The lecturers were Guest Professor Monta Nakajima (Professor at the Graduate School of Project Design) and Project Professor Mikako Hayashi. Professor Nakajima spoke about locality branding and its strategy by presenting the good practices of Obuse Town in the Nagano Prefecture and Kamiyama Town

in the Tokushima Prefecture. Project Professor Hayashi spoke about the branding of local community businesses that is being conducted in different parts of Japan based on her fieldwork on the theme of rural and urban symbiosis. The lectures were followed by a lively question and answer session. More than 50 people attended the after-seminar get-together, networking on the theme of regional revitalization. As can be observed from the Japanese Government's policy direction of "Local Creation", revitalization of regions is currently of great interest. We plan to conduct the third seminar next spring with a view to digging deeper into the topic.

## TOPIC 2

## The Time Management Special Course to master the “8 skills to shorten delivery time”



The lecture on shortening delivery time by Mr. Kanie.

The Management Design Center held the Time Management Special Course, an open seminar, at the Hiyoshi Campus on Friday, August 8, 2014. This course entitled, “Master 8 Skills to Shorten Delivery Time,” provided practical training on shortening delivery time in order to balance the quality cost and delivery time (QCD), which is the core of

project management. Fifteen people attended the course. The first half of the seminar focused on the importance of time management for projects; Associate Professor Tetsuya Toma gave a lecture and quiz. The latter half of the seminar was led by Mr. Jun Kanie of iTiD Consulting, Ltd. He introduced eight strategies to shorten delivery time while leading exercises to learn activity sequencing based on Design Structure Matrix (DSM) which can minimize redundancy. The topic for the exercise was that participants had to come up with a strategy, using the method they had learned, to meet the deadline, despite

various constraints, for a company who received a report that the release of a new model may be late for the season due to a delay in the delivery of parts. Fifteen individuals attended the course from various industries; they were divided into three groups in order to put the method they had learned into practice and acquired the eight skills. Participants networked after the course, which offered a good opportunity for cross-industrial exchange. The Management Design Center will continue organizing one or two special courses yearly concerning knowledge of project management.

## TOPIC 3

## Japan-US Joint Team (in which Keio SDM students played a central role) wins first prize at the International Student Contest—Design for Human Exploration of Mars



Kshitij Mall (front row, first from left), Shota Iino (middle row, second from left) and the other members of Team Kanau.

website of the contest: ▶ <http://www.marssociety.org/home/press/announcements/teamkanauwinsinspirationmarsstudentdesigncontest>  
 website of the team: ▶ <http://kanau-mars.jimdo.com/> (in Japanese)

The Inspiration Mars Foundation was founded by Dennis Tito, the first person to have traveled into space at his own expense. The Foundation aims to realize human exploration of Mars and organized an international contest for students on the design for human exploration of Mars on

Saturday, August 9, 2014. Thirty eight teams from 11 different countries participated in the contest. The Japan-US joint team, “Team Kanau,” led by Mr. Shota Iino (Keio SDM) and Mr. Kshitij Mall (Keio SDM exchange student from Purdue University in the US) won first prize.

## TOPIC 4

## The Keio SDM Faculty Camp



Left: Welcoming address by CEO of Ichinoyu Group.  
 Right: Participants smiling upon completion of the camp.

On Monday, August 18 and Tuesday, August 19, 2014 the Keio SDM Faculty Camp was organized at Ichinoyu Honkan—a pioneer of the hot spring hotels in Hakone—for two days with the aim of discussing the past, present and

future of Keio SDM and formulating a strategy for future education and research. At the opening of the camp CEO Ogawa of the Ichinoyu Group shared his experience of transforming a traditional exclusive *ryokan* (Japanese style hotel), which was handed down for generations, into a casual hot spring hotel that is more welcoming to the general public. Participants learned from their spirit—not settling for the status quo and to keep challenging oneself—which is also true for Keio SDM. At the camp we took a look back at the time when we were working towards the establishment of Keio SDM, sharing what sort of passions and discussions led us to the establishment of Keio SDM with the faculty members who joined later. Then we

organized a discussion on the good things and not-so-great things about Keio SDM today, thereby exploring the future directions and what needs to be done going forward. Over the two-day period we tirelessly planned for the future faculty-to-faculty education and research collaborations. The Office of Student Services, serving as the window to students and supporting Keio SDM operationally, was also invited to provide a number of valued inputs for improvement. The two-day camp was extremely fruitful. Upon returning from the camp, faculty members are beginning to act upon the collaboration plans they jointly put together. Count on us to strive to attain new goals for the future at Keio SDM.

## TOPIC 5

## Information session for the Project Design Camp



Left: Words from a participant from last year.  
 Right: Takahashi Head Coach speaking about design capability for projects.

An information session for the Project Design Camp (two sets of two nights and three days in November and December) was held at the Hiyoshi Campus on Wednesday,

August 20, 2014. At the beginning of the information session, Lecturer Yoshikuni Takahashi, who will serve as a Head Coach for the camp, gave a short lecture on the design capability essential for projects. Associate Professor Tetsuya Toma, a coordinator of the seminar, then spoke about the objectives of the camp, including the type of human resource the camp aims to nurture. Finally, two former participants shared their experiences from the previous year, talking about how they found the camp, what skills they gained and how they are applying them to their work. Roughly 30 people attended the information session enthusiastically. Following the information session, a gathering

was organized for those who would like to find out more about the camp and/or need individual consultations. Participants were given answers to their individual inquiries about the camp and the application process, reducing their anxiety and addressing their questions. The first half of the camp is planned from November 4 to 5 and the latter half from December 2 to 4, a total of six days. On the final day completion certificates will be handed to those who complete the course. For PMP holders a PDU course completion certificate will also be issued upon request. As of now more than 20 applications have already been received this year, and the camp is expected to be a success.

## TOPIC 6

## The AGRI (Agricultural) Laboratory visits Obuse Town in Nagano Prefecture



Interviewing at a chestnuts sweets shop in Obuse.

from Saturday, August 24 to Tuesday, August 26. The Keio SDM Obuse Social Design Center was established this summer, and the field trip was

conducted as part of the Center’s research activities. Project Professor Mikako Hayahi and Guest Professor Toshiyuki Yasui, together with students and researchers, participated in the trip (a total of 13 people). Obuse Town is famous for its advanced approach to revitalization as an autonomous community with the theme of “Chestnuts, Hokusai and Scenery.” This time we also observed additional attractions of the town such as their efforts in community mobilization through organizing sports events inside the temples and different initiatives for the sixth sector industrialization. In addition, the interactions

with the townspeople through farmhouse bed and breakfast and agricultural work have given students who grew up in the cities valuable experience. On the final day a workshop with the people of Obuse Town was organized with the theme, “The Future Agriculture of Obuse”, in which suggestions on different strategies to promote agriculture were presented in the form of skits. After returning from the trip, students prepared a report and submitted it to Obuse Town. We plan to continue our research on Obuse Town in the future.

## TOPIC 7

## The symposium for “Koto” Monozukuri (“creation of matters and things”): Issues and Measures of Japanese Companies Concerning Innovation Generation



**Left:** Professor Masaru Nakano “Factors Hindering Innovations of Japanese Companies—from the Global *Koto Monozukuri* Research Group”.

**Right:** Mr. Katsuhiro Azuma from the Department of Intellectual Property Utilization Business at Fujitsu Ltd.: “Business creation by utilizing the intellectual property of other companies”.

The first symposium of the “*Koto*” Monozukuri Research Group entitled, “Issues and Measures of Japanese Companies Concerning Innovation Generation,” was held on Friday, September 5, 2014. The “*Koto*” Monozukuri Research Group is composed of Professor Masaru Nakano of Keio SDM and experts from various fields including the government, private companies and academic institutions. This research group deals not only with making *mono* (“things”), but also with creating *koto* (“matters”). In other words, the group conducts research into how the business side of things and technologies should be

managed in order to generate innovations. At this symposium we discussed why innovations are not generated in some companies and why excellent technologies of some companies fail as a project, thereby exploring innovation-hindering factors faced by Japanese companies. At the symposium we also invited different experts to share successful cases of “*Koto*” *zukuri* (“creating matters”) with excellent technology management and speak about what kind of projects are considered to be worth investing in from the viewpoint of investors. First, Associate Professor Tetsuya Toma of Keio SDM introduced the Management Design Center and explained that human resource development in the area of project management is essential if Japan wants to strengthen its competitiveness in the global market. Then Professor Masaru Nakano of Keio SDM illustrated factors hindering innovations within Japanese companies, while making comparison with Swiss companies that are globally recognized as successful examples. He also emphasized the importance of nurturing human resources and establishing systems for integrating element technologies, external technologies, external services and services of their own. Guest Professor

Shuichi Fukuda of Stanford University, who is an advisor to Keio SDM, and Assistant Professor Takayuki Tomaru of Keio SDM explained the differences between Japan and the US in terms of climates for new business creation. Professor Tomaru explained how new business creation should be, and the need for Japanese business managers to learn about this. Mr. Katsuhiro Azuma from the Department of Intellectual Property Utilization Business at Fujitsu Ltd. spoke about business creation utilizing the intellectual property of other companies. He introduced new business approaches such as patents not in use being utilized through partnering with local government and small-to-medium companies. Finally, Mr. Motoki Korenaga, Investment Group of the Innovation Network Corporation of Japan, introduced some cases in which technologies and ideas buried in university laboratories, ventures, SMEs and large companies were utilized to create new businesses. The symposium was oversubscribed this time. As it motivated many companies to participate in the “*Koto*” Monozukuri Research Group organized by Keio SDM, it is expected that the research group will have even greater diversity in the future.

## TOPIC 8

## The Lecture on “New Trends of Business Management”



The Management Design Center affiliated with Keio SDM held a seminar entitled, “New Trends of Business Management” on Sunday, September 12, 2014. Thus far we have organized lectures on design thinking, systems engineering

and project management. This year we plan to focus on business; and this lecture was part of such initiatives. Associate Professor Tetsuya Toma first introduced the Center. Professor Kenichi Takano then explained how organizational culture, performance and staff satisfaction relate with one another. Assistant Professor Yoshikazu Tomita gave a lecture on the basics of innovation management from the view point of “Can we manage

innovation?” Upon defining sustainability, Professor Masaru Nakano gave an overview of *monozukuri* (“the art of making things”) from the perspectives of green, risk management and competitiveness. The venue, which can accommodate up to 80 people, was almost packed with participants who took part in a lively question and answer session. A networking session continued after the seminar using the faculty lounge.

innovation?” Upon defining sustainability, Professor Masaru Nakano gave an overview of *monozukuri* (“the art of making things”) from the perspectives of green, risk management and competitiveness. The venue, which can accommodate up to 80 people, was almost packed with participants who took part in a lively question and answer session. A networking session continued after the seminar using the faculty lounge.

## TOPIC 9

## The Japan Creativity Society’s award ceremony



The award ceremony.

An academic paper submitted by Mr. Tomoyuki Imaizumi (former master’s student), Associate Professor Seiko Shirasaka, Guest Professor Toshiyuki Yasui and Dean Takashi Maeno entitled, “Subjective Evaluation of Structural Shift Ideation Using Affinity Diagram and Two-Axis Diagram”, received the Japan Creativity Society Research Paper Award. In addition, a

presentation Mr. Yoshikazu Tomita (doctoral student) gave at the Research Conference last year entitled, “Creativity Education Method Using *System × Design Thinking*: Applications to Higher and Secondary Education”, received the Research Presentation Award. Both awards were handed to the recipients at the SANNO Institute of Management on Saturday, October 25, 2014.

## TOPIC 10

## The Conversation Experiment Project for the Robot Astronaut “Kirobo” which Keio SDM helped developed receives the Good Design Award



“Kirobo” at the international space station.

The Conversation Experiment Project for the Robot Astronaut “Kirobo”, a project in which Keio SDM collaborated and Mr. Yorichika Nishijima (2<sup>nd</sup> year master’s course) promoted as a core member, received the 2014 Good Design Award. This project is implemented by the Dentsu

Inc. Research Center for Advanced Science and Technology at the University of Tokyo, ROBO GARAGE Co., Ltd. and Toyota Motor Corporation with the cooperation of the Japan Aerospace Exploration Agency (JAXA).

## COLUMN

## The need for third-party institutions providing reassurance and safety

Nowadays I receive many requests from companies and government offices to be their external auditor. In the West insurance systems are well established and there are many organizations with history and authority that can set fair and transparent premium rates as third parties. Lloyd’s, for example, is well known. On the other hand, Japan does not have much of a history of utilizing such third-party institutions. However, I was stunned to learn that Professor Fukuzawa was the first person to introduce modern

insurance systems to Japanese people through his book, *Seiyō Jijō* (“Conditions in the West”) written in 1867 (Keio 3). I am full of admiration for Professor Fukuzawa’s keen insight. In Japan today external auditors are mostly composed of scholars who do not have conflicts of interests; however, this may not be sustainable. It is urgent therefore that a proper system is designed.

(Takano)

## Laboratory / Center profile

### VSE Center (Japanese VSE Center)

**Representative:** Associate Professor Naohiko Kohtake

**Members:** Associate Professor Seiko Shirasaka, Associate Professor Testuya Toma, Kazunori Shioya Researcher, Makoto Shizunaga Researcher, Motoko Takeuchi Researcher (SDM Research Institute researchers), Master's and Doctoral students

The VSE Center was established in February 2011 as an institution which promotes improved system development processes for very small entities (VSE), such as small-to-medium companies and small-scale departments or projects within large companies.

#### Objectives

- (1) To strengthen international competition by enhancing the stamina of IT companies
- (2) To establish processes for “*monozukuri*” at which Japan is good, thereby positioning Japan strongly in the international market

#### Activities

The VSE Center aims to contribute to the improvement of system development processes on the ground and has already produced some concrete results through industry-government-academia collaborations by utilizing a VSE international standard (ISO/IEC29110 series). The VSE standard sets out standards for compact development processes that can be applied even to small organizations while providing guidance on its utilization. What is more, volunteers in each country run VSE networks as international centers for dissemination, providing support such as the provision of relevant documents and tools free of charge. In addition, a VSE standard was established for systems in 2013. Based on the suggestion from Japan (SPINA3CH), autonomous improvement standards and VSE assessment/audit standards are also under discussion. In Japan, on the other hand, the Japan Information Technology Service Industry Association (JISA) published the world's first description entitled “Guidance on Introduction of VSE Standards” which was introduced through the VSE network. Introductory seminars are also being conducted for Kanagawa Information Services Industry Association members. Starting this year, a joint committee composed of JISA and the Japan Embedded Systems Technology Association (JASA) began to explore the establishment of VSE



VSE Center Portal Site:

▶ <http://www.vse.jp/>

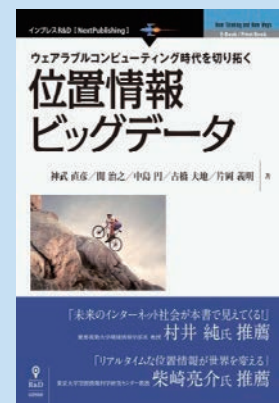
standards that incorporate security and safety in the support of the “*monozukuri* process” including embedded systems. There is thus an increasing need for compact VSE standards that allow low-cost and high-quality development. The VSE Center has also been engaged in the activities described above with our researchers serving as international and domestic committee experts.



### Location Information Big Data

While space positioning systems such as GPS satellites and quasi-zenith satellites are evolving, ground networks such as mobile phones are expanding exponentially. Increasingly we can acquire data on the status of individuals and things, as well as their locations in conjunction with various sensors. We can also capture and analyze what is happening where and how it is working more swiftly than before. Such change in the environment can potentially innovate or reestablish various services that have been developed based on the presumption that only limited kinds and amount of data would be utilized. This book was written as an introductory reader for business persons who want to create new services using big data such as massive amounts of location information. The first chapter illustrates the relationship between location information big data and business. The second chapter describes the

size of the market. The third chapter provides a technical description of location information systems for those who are thinking of moving onto the field of location information service. The fourth chapter introduces new, emerging services, such as those that use GPS receivers (which have become a commodity nowadays). The fifth chapter explains the issue of privacy which is important when dealing with location information big data. The sixth chapter talks about future prospects of the sector, such as O2O and indoor location information services. The book also provides a description of the situation concerning open data, which is also attracting attention, and data licensing. This book not only features matters concerning location information and big data businesses, but it also provides an overview of the changes in terms of how a city and society are set up by including a number of interviews with specialists working at the



Authors: Associate Professor Naohiko Kohtake and Assistant Professor Madoka Nakajima  
Published by Impress R&D on April 17, 2014

frontline of each sector – from policy makers at the center and local government, to business managers and entrepreneurs. We hope that this book will inspire readers to provide a path for future society.



SDM Research Institute, Graduate School of System Design and Management at Keio University  
Collaboration Complex, Keio University, 4-1-1 Hiyoshi, Kohoku-ku, Yokohama, Kanagawa 223-8526  
Tel : 045-564-2518 Fax : 045-562-3502 E-mail : [sdm@info.keio.ac.jp](mailto:sdm@info.keio.ac.jp)

**SDM**  
System Design and Management