

IT Human Resource Development in SAI-Japan¹

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Summary

Like many SAIs, SAI-Japan has been facing difficulties in securing IT skilled human resources. On one hand IT recruitment by Japanese Government is declining, on the other hand, IT projects still dominates huge part of Government expenditures. Though the need for IT skilled auditor is high, the number of IT skilled auditor is low.

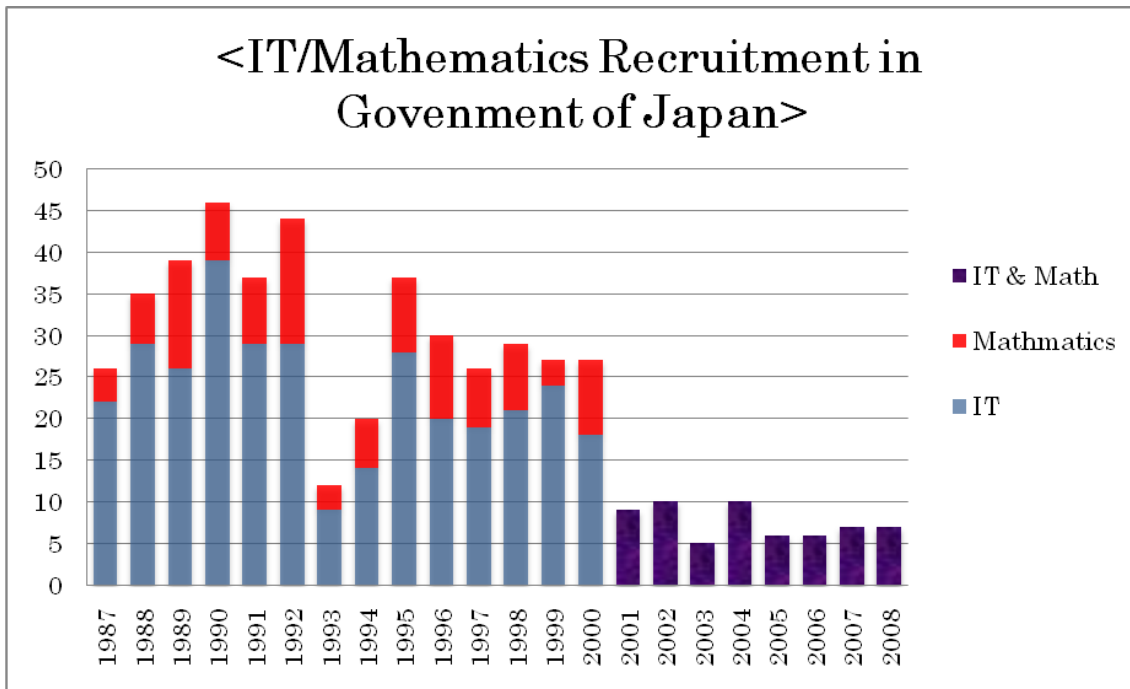
From the year 2005, SAI-Japan is trying to cover the gap by using human resource development, which is called ASTRA (IT Audit Skill-up TRAining Team). Every year, 3 to 5 auditors are recruited to join ASTRA as trainees, and the trainees acquire IT-field strength and consultation skills through 3 years experiences of discussion with outside IT specialists, study visits of IT system development process, member meeting, blog-oriented-education, OJTs and so on, while they do regular audit activities. The key features of the ASTRA trainee selection are that the person is open to learn new areas regardless of whether he/she has IT basic skills, and who can present to others what he/she has learnt. After the training, trainees remain ASTRA team as supporters and will conduct IT audit and/or give IT audit consultation to other auditors. The ultimate purpose of ASTRA is changing our culture toward IT audit.

Background

Like many SAIs, it is difficult to hold enough IT skilled human resources in Japan. Nowadays, the number of IT / Mathematical specialist recruitment is declining to about 1/6 of the peak (in 1990) in the Government of Japan. However, IT projects dominate high proportion of the Government expenditure, owing to e-Government promotion policy in Japan. Though the need for IT skilled auditor is high, the

¹ Views expressed in this paper belong entirely to the author and do not represent the formal opinions of SAI-Japan.

number of IT skilled auditor is low.



SAI-Japan's Human Resource Development before 2005

Before 2005, SAI-Japan had a few excellent IT auditors and they worked stood-alone. SAI-Japan did not take any actions for building up their successors. SAI-Japan had only two types of short term training for IT human resource development. The one was IT Audit workshop training, and the other was software training of Ms-Excel, Access and PowerPoint, etc. Both trainings are five-days training, designed and coordinated by the office of HRD of SAI-Japan. Auditors at certain level would be called to take two courses from these four areas; financial audit, performance audit, audit of construction project, and IT audit.

IT Audit Workshop comprised of three courses based on the level of auditors; the levels are 10 years' experienced auditor (middle team member level), 15-20 years' auditor (senior team member level), and 25 years' auditor (team leader level). The main focus on the courses of first two levels is case study and IT audit methodology. The team leader level training focus on the giving information on IT audit and introducing IT audit cases to promote younger auditors to try.

Unfortunately, these courses completed only 5 days and simple follow-up questionnaire would be followed. Majority of trainees got a taste of IT audit, but it

was difficult for the trainees to settle the knowledge and skills gained in the courses.

From 2005

SAI-Japan is trying to cover the gap by using new human resource development, which is called ASTRA (it stands for “IT Audit Skill-up TRAining Team”). This scheme is a long term for carefully chosen trainees to be key successors for our future IT human resource development based on the top down decision. Above-mentioned short term training is maintained as well as this new long term training. SAI-Japan decides to develop IT Audit human resource by utilizing excellent auditors of non-IT area. We have already some excellent IT auditors, however, existing human resource development was not enough to produce them constantly. Therefore, the tacit knowledge of them has decreased as they retired.

Mission of ASTRA

Main purpose of ASTRA team training is building up IT Audit Champions with sound skill of knowledge management by utilizing such tacit knowledge. And the missions for ASTRA trainees are as follows.

1. Be IT Audit Champion
2. Be IT Audit Consultant
3. Develop IT Audit Skills and Methodologies
4. Introduce and implement IT Knowledge Management
5. Presenting SAI-Japan in International Cooperation of IT audit
6. Be Trainer after the training

1. Be IT Audit Champion

Making good practices in IT audit implementation would lead to quick contribution to the organization. By utilizing knowledge and methodology acquired through the long term training, the trainees should work hard to be IT audit champions.

2. Be IT Audit Consultant

Not only as an auditor, but also the trainees should play the role for good IT audit consultant.

3. Develop IT Audit Skills and Methodologies

In order to promote other auditors to try IT audit, the ASTRA team should develop IT audit skills and methodologies which would be easy-to-follow for other auditors.

4. Introduce and Implement IT Knowledge Management

To lower the barrier of IT audit and improve organizational power, knowledge management is very important. The trainees should build the database of IT audit and constantly provide IT audit case analysis to other auditors. The lessons learnt through the team experiences should be shared within the team at first, and then transform them to be comprehensible for all the auditors in SAI-Japan.

5. Presenting SAI-Japan in International Co operations

As the representative to INTOSAI/ASOSAI or other International Meeting on IT audit, the trainees should take advantage of the opportunity to present SAI-Japan.

6. Be Trainer after the training

After the team training, trainees will remain ASTRA as trainers as well as supporters to keep contributions to the team activities.

Selection of Trainees

Every year, about 3-5 young to middle auditors are recruited to join ASTRA as trainees from the recommendation among ASTRA team members or senior directors, and the trainees acquire IT-field strength and consultation skills through three-years-experiences of discussion with outside IT specialists, member meeting, blog-oriented-discussion/education, OJTs in design and operation of IT audit training courses in SAI-Japan, study visits of IT system development process and so on, while they do regular audit activities.

The key to success in the human resource development highly depends on how to choose trainees. We set the rules for the selection of the trainees as follows;

1. Excellent Auditors

Before becoming IT Audit Champion, it is important for the trainee to have good sense of audit in general. For SAI-Japan, the priority in IT audit is almost the same as other audit area such as financial audit, performance audit, audit of construction, audit of services, etc. And audit scope for IT audit is almost the same as other audit. Therefore, excellent auditor in other audit can utilize skills and methodologies acquired through the training to his/her regular audit

projects. SAI-Japan can expect quick impact from the training.

2. Not IT-OTAKU (IT Nerd)

This training course comprised of many factors, other than IT related knowledge. And how to utilize IT knowledge and skills for our audit is the key to success. Therefore, we put priority on other universal factors rather than IT proficiency.

3. Open to new knowledge

For future IT knowledge management in SAI-Japan, the trainees should learn, acquire and sublimate new knowledge and methodology to share within the organization. Accordingly, the openness to new knowledge is the important feature to the trainees.

4. Present him/herself

Trainees will face many opportunities to present themselves during the course, such as presentations in academic workshop, discussions with outside specialist, blog-based discussions, and so on. Keeping silence is not our virtue for our sharing knowledge and experiences. Absorbing, digesting, and presenting tacit knowledge of existing excellent IT auditors, other outside specialists and other team members are the important process for future IT knowledge management.

5. Age 20's to 30's

For the quick impact on our audit outcome, we target generations from assistant auditor who is in team member level to assistant director who is in team leader level.

The training director is one of our excellent IT auditors, and from the year 2005, the number of total ASTRA team member is 15 (including the training director). The profiles of chosen ASTRA trainees are as follows;

- From the academic back ground, four of the member graduated from the science courses (engineering and architectural course), eleven graduated from humanities courses (law, economics, education, sociology etc.)
- From the nature of the section where he/she belongs, three of the members belong to IT related divisions(2 belong to Office of Data & Information, 1 belongs to Information and Communication Audit Division), eight of the member belong to audit divisions which may have chance to implement IT audit, and rest four belong to secretariat of non-IT area.
- From the age, five of the members are in 20's, eight are in 30's, two are in 40's and the team director is in 50's as of the year 2010.

Other than such statistics, the key common features within the ASTRA team are the willingness to share his/her own core competence, the openness to new learning, and the devotion to the tasks. Therefore, the atmosphere during discussions among the team is constructive, positive, and promoting.

Training Method

ASTRA team training is 3 year long term training course. The trainees acquire IT-field strength and consultation skills and so on through three-years real experiences of discussion with outside IT specialists, study visits of IT system development process, member meeting, blog-oriented-discussion/education, OJTs and so on, while they do regular audit activities. They play the role for IT auditor during the ASTRA training, on the other hand, working as an auditor, an officer, or assistant director while engaging their job in their own division. As is the usual case with an auditor, we have many field trips and are busy when in the office for the preparation of next audit and the reporting of the field audit. Trainees join the ASTRA team activities over compromising their original tasks. After 3 years' training, trainees will stay ASTRA as trainers as well as team supporters and keep contribution to ASTRA activities in various occasions.

ASTRA team training is comprised of many activities. These are as follows;

- Regular Meeting

Twice a month, we have lunchbox meeting for the discussion of current topics or projects and for making some catch-up among the team. In the occasion, we learn how to share knowledge and present his/her own view from the team mates. Each team member has the peculiar excellence for the team mates to learn. Understanding, each member's core competence is very useful for project implementation as ASTRA team training activities. We experience human resource management through the ASTRA team activity.

- Blog- oriented Discussion/Education

Even during the field trip, trainee can join discussions or share views or knowledge by accessing team blogs. Blog-oriented discussion/education is useful tool because we do not need to bind trainees' time. ASTRA team has two blogs. The one is for the discussion and knowledge sharing, and the other is for nourishing the team relationship. Trainees can ask questions to the team

members on site, and team members, at the time available, can provide information or answers by the blogs. Also, questions or consultation on IT audit from other auditors would be discussed on the blog and the support will be followed to the auditor.

- Boot Camp

Boot camps are intensive training for the trainees. It enables trainees to concentrate on the training and build strong bonds to other team members. ASTRA team training use 3 days boot camps every year. Through the brainstorming, the IT development planning workshops, trying ice-break tools, learning IT skills, CAATs simulation, the trainees are designed to absorb multiple understandings of IT audit.

- On-site Tour

Getting the real experiences is one of the focuses in the ASTRA team training. By observing the process of IT system development and manufacturing PCs, and feeling the new technologies, the trainees understand what the Government has been paying for. ASTRA team has visited the IT manufacturing factory, IT showrooms, and IT bender companies.

- Discussion with Specialists

To understand the trend and key issues surrounding IT policy, ASTRA team has discussion meeting with inside/outside specialists as many opportunities as possible. The specialists we discuss with are IT benders, academic researchers, researchers in think tank, CIOs, CISAs, and so on. The note of discussions would be on the blog for knowledge sharing among the team.

- Academic Workshop

As the ASTRA team training director has already had his own channel to academic workshops, he invited the team members to academic workshops. The ASTRA team attends or make presentations at workshops such as that of Systems Auditors Association of Japan, Japan Association of Management Systems and Japan Society of Security Management and so on.

- International Co operations

One of the key missions of ASTRA team training is becoming human resource

for presenting SAI-Japan in the IT international co operations. International co operations are categorised in bilateral and multilateral co operations. As for bilateral co operations, the ASTRA team is providing contents and human resource to the office in charge of international relations when the request from the guest country would deal with IT audit.

Especially, as for the cooperation with WGITA of INTOSAI, the team proactively commits by attending seminars, writing reports, and sending articles to “into-IT” constantly. And some of you may remember WGITA in Tokyo in 2006. Through such real experiences, the trainees will gain huge implicit/explicit knowledge from attendants of other member countries. Also, the trainees will experience the process of knowledge sharing within SAI-Japan after the attendance.

- IT Training Planning & Coordination

The trainees is not only the trainee, but also becoming trainer of the IT audit workshop training which basically in charge of the office of HRD in SAI-Japan. After launching the ASTRA team, the team contribute from the planning to the analysis of the feedback reports from the trainees after the course completion. The team draws the grand design of IT audit workshops and defines contents, finds lectures, prepares for the materials for the contracts, becomes lectures in some of the courses, prepares educational materials, sets up PC environments, makes short test, and analyzes the feedback for future courses. Such whole process the trainees experience would surely be the asset for future human resource development in SAI-Japan.

ASTRA in 2010

The ASTRA team has produced the 4th batch and total number of the member is 15 (including the team director). Some of the team members are out, owing to be seconded to other ministries or to study abroad. But the outcomes of the training have started to come out. Apart from above-mentioned activities, the team has realised the need for case analysis of all the IT audit reports in SAI-Japan to knowledge sharing within the organization. The regular compiling IT audit analysis has discussed in the team.

And the introducing audit ideas utilizing IT have started beyond the SAI-Japan.

You will see the article “Audit Ideas Utilising Google Earth” in the new edition of into-IT journal. Some of the ideas using Google Earth, the pivot –table function of Ms-Excel, and CAATs soft ware are introduced in the lecture of IT Audit Workshop training by the ASTRA team member. The lecture won the favourable reputation from all the trainees of the course.

The total number of IT qualification holder is 8. (The one passed the application system engineer exam, 5 passed the fundamental IT engineer exam, and 2 have passed the IT-Passport examination.) And one has the qualification of the business compliance. As the team director promotes to have such qualifications of IT, the number will be increasing.

Future

The ultimate purpose of the ASTRA team training is changing the culture toward IT audit in SAI-Japan.

Current impression on IT audit in SAI-Japan is “very complicated, highly specialized, and therefore difficult to do” for the auditors in general. Huge amount of the Government spending has left alone without our audit as a consequent. Low barrier to IT audit within the organization will be our urgent issue.

The training will go on for the sustainable IT human resource development in SAI-Japan. The team will show the great dedication to producing IT audit champions in each audit division, providing good consultation to auditors, improving accessibility to IT audit information, and doing IT audit knowledge management within the organization and other challenging areas on IT audit.