

**APEC capacity building model in “ICT applications for people with special needs”**

(first draft)

Tokyo, 25<sup>th</sup> April 2012

## **1. Introduction**

### ***1.1. Why do we need to build capacities in “ICT applications for people with special needs”?***

The world is being transformed by ubiquitous Information and Communication Technologies (ICT). Increasingly, these technologies are being introduced to workplaces, homes and public spaces both in developed and developing countries. The adoption of ICT by members of society has been rapid from the 80's, and the pace continues unabated. However, this adoption has always been driven by younger citizens and companies. A gap has existed whereby senior members of society and the disabled people – have lagged far behind the younger generations in adoption and use of ICT. Even though disabled and elderly people may benefit hugely from ICT, the production of new applications focused on these groups has been limited. Unless more concrete efforts are taken toward bridging the gap between the younger and older generations, this gap will continue to exist because younger generations will always be more attuned to new ICT than older generations.

At the present time many senior citizens are still unwilling and unable to use computers. Skills that young people can take for granted are extremely difficult to master for people who were not exposed to the technology in their youth, and who may have deteriorating eyesight, hand-eye coordination and poor learning capabilities. These problems are similar for disabled people as well. For example, blind people have extreme difficulties to use ICT, because most ICT relies on visual information presented on screens. Those who are not able to use their hands are similarly impaired. They will be unable to use input methods such as the keyboard, mouse, or touch pad. Special methods to input and present information will need to be utilized to make ICT available for these groups. However, the benefits of ICT – being able to access immense resources in the World Wide Web for instance – are the same as for healthy, young individuals. In fact, the potential may even be greater for elderly and disabled people. After all, their movement may often be highly restricted, making ICT-enabled, improved communications and information resources of vast interest and utility to these groups.

As the “graying” of many developed and developing countries continues, the numbers of elderly people are rapidly increasing while the numbers of young people are further declining. Thus, it is of ever more importance for governments to support the adoption of ICT by these elderly people. Countries that can best bridge the digital divide among the young and old can have an advantage, as they can boast more informed and skillful populations, promote national information exchange and trade, and build larger national markets for ICT devices. Better communication and information exchange opportunities for elderly and disabled people can result in improved health and wellbeing for these groups, which can reduce national health expenses. It can also pave the way to cut government expenses by removing obstacles to electrification of government services for citizens.

While APEC countries differ greatly in terms of elderly populations, the need for an action plan to build capacities for the ICT use of elderly and disabled people is not necessarily different. For example, Japan has one of the biggest ratios of elderly people in its population, and it is thus much more urgent to focus resources to support the ICT capabilities of its elderly citizens than for e.g. Indonesia, which has a very young population. However, in the future, Indonesia's elderly population will be growing, and early action would pay back dividends in terms of the ICT literacy of future pensioners and retirees. The digital divide exists in all countries and therefore lessons can be learned by countries that are just starting to address this issue from countries that are already well on their way to addressing it. A common framework is needed to tackle the issue in the APEC level.

There are various capabilities that should be built to support elderly and disabled people in the use of ICT. Basic courses on the use of word processing, spreadsheet and presentation tools, and the Web browser should be considered common skills for every citizen. However, the ability to access ICT in the first place should be supported in order for elderly and disabled people to even have a chance to learn these skills. One possibility might be to facilitate the introduction of ICT to elderly people by setting up special classes in community education centers which are equipped with the necessary accessibility tools for these groups. Another possibility might be to introduce ICT into the lives of especially vulnerable groups by integrating ICT tools into healthcare equipment that is utilized by these people on a daily basis as part of their healthcare plan. Whatever the approach, a national organization to plan and implement these solutions – and report the results – should be devised. Funding could be channeled through this organization to support initiatives throughout the country. Moreover, these national organizations should share methods, results and best practices through the Ministries at APEC level in a special APEC forum.

By this report, we encourage APEC countries to consider developing ICT capabilities for elderly and disabled people. Such an approach should have roots in national initiatives, but equally importantly, should take into account the international level by acknowledging that the challenges faced by vulnerable groups in ICT are shared by all countries. Thus, solutions should also be built jointly in cooperation. This capacity-building requires efforts from various participants, including the caretakers and trainers of elderly and disabled people, the national task force that supports those caretakers and trainers, healthcare personnel and social workers, government employees that are planning initiatives involving these groups, and APEC headquarters employees. The response should necessarily involve all these people, and offer the required information, training, and resources to achieve nationally and APEC-level objectives.

## ***1.2. The training situation in APEC economies***

There is so far too little attention toward ICT capacities for aged and disabled people in the developed countries. While research and certain academy-business collaborated test projects do exist, these have taken place mainly in Europe, the United States and Japan and focused on healthcare ICT. For example, Japan is experimenting with robot technology to service elderly people in nursing homes, and several projects have been conducted on telemedicine applications to provide health monitoring services for older home patients over long geographical distances. These attempts are commendable but do not address the problem of digital exclusion for elderly and disabled people. New initiatives are needed that address this core problem.

Previous approaches viewed “people with special needs” as patients and used ICT as tools to improve their health, treat diseases, and alleviate disabilities. However, this report added another approach treating “people with special needs” as intelligent and capable citizens who have been so far been ignored by ICT education agendas and ICT markets and therefore have become sidelined in the information society. The health, quality of life, and productivity of these individuals could be significantly improved if their access to ICT and ICT skills would be supported – and this would contribute to improved welfare for the society at large as well.

In industrialized economies, different stakeholders (such as governments, the private sector, universities, and professional bodies) have begun to show an interest in “ICT inclusion for marginalized groups”. Some research programs were started by the European Commission to understand the needs, trends, and the potential of ICT for these groups. These programs, workshops and seminars permit easier access to information and education for elderly and disabled people. For example, in Finland, there are ICT Associations for seniors at national or regional levels. These associations organize many different activities such as short-courses for small group, voluntary instruction on basic computer or mobile phone use instruction to help the members (elderly people) to understand and use ICT for their daily life. However, we could not find any curriculum on the theme.

While the question of ICT skills for elderly and disabled people has not been strongly on the agenda of developed countries, developing countries in APEC and elsewhere have had even less focus on this topic. As noted above, however, it is imperative that not only developed countries but also developing countries consider their stance in this regard. The practical approach for these countries may be different; for instance, the basic infrastructure of ICT networks may be lacking in many rural areas in developing countries, and the numbers of terminal equipment such as computers and smart-phones may still be few. In this environment, would the government be justified in ignoring the marginalized groups such as the aged people and disabled people in order to concentrate all efforts to improve the ICT abilities of the majority of the population? We believe it would be misguided. In traditional communities in rural areas elderly people have valuable knowledge of old customs and crafts and they are highly respected in those communities. Focusing on the provision of ICT support to them could – via information exchange – contribute to preserving the traditional knowledge for future generations. Due to their status, ICT adoption by elderly people may actually drive adoption by young people in some areas rather than the opposite.

The emerging economies in APEC have shown their interest to the issues of ICT for development and the digital divide. However, the agendas of these countries are focused on basic infrastructure for the majority of the population, rather than supporting marginalized groups. Many developing economies face a funding shortage when it comes to creating training programs for “ICT and elderly/disabled people”. Therefore, this question has not been strongly on the agenda of these countries.

In developing countries, rather than build new projects and initiatives on top of existing infrastructure, the groundwork may often have to be built from scratch. This involves solving the technical problems of how to use ICT in locations with poor-quality Internet connections, but also very basic challenges such as the stable provision of electricity for the equipment. The best experts on this topic may be the aid workers of various NGOs, who have often aligned interests and projects, and are interested in working with the government. In

developed countries, the basic infrastructure already exists, and thus the main challenge lies in integrating various services to provide the necessary support for large numbers of elderly and disabled citizens. This requires first and foremost an in-depth investigation of all the existing projects that have relevance to the ICT use of elderly and disabled people. Many small, local projects may exist but they have not received wide publicity in the media. Therefore, national effort to map these projects is necessary.

One of the problems the APEC economies facing is the lack of individuals adequately trained in “ICT for elderly and disabled people” who then could act as the teachers for the marginalized groups. We could not find widely available English-language information on “official” training courses in “ICT applications for people with special needs” in any APEC member countries. Training on this topic seems not to be widely available in community schools and other institutions. As a result, it is necessary for APEC member economies to invest in developing the training (in particular, training the government officers and training the trainers). Before that, it is recommended that APEC should conduct a comprehensive survey to understand the current training situation in its member economies. Any existing programs may be applied in order to share the early experiences and assist countries which are just beginning to deal with this issue.

### **1.3. *The objectives of the APEC capacity building model***

This report presents a model for APEC countries’ capacity building in terms of the ICT abilities of elderly and disabled people. This model can be used by national authorities to plan for setting up the task force that takes operational responsibility for the capacity building. The model is independent of the changing policy and training environments and may be utilized in any APEC member state. The key objectives of the capacity building model can be defined as following

*To examine the level of awareness of trainers and government staff on the training of elderly and disabled people on the use of ICT.* The degree to which various interest groups are aware that elderly and disabled people need special attention in ICT training is unclear. There should be a national effort to map this understanding in every APEC country before capacity-building activities are taken. Resources may then be focused preferentially on the interest groups with most impact and least awareness on the importance of ICT training to elderly/disabled people.

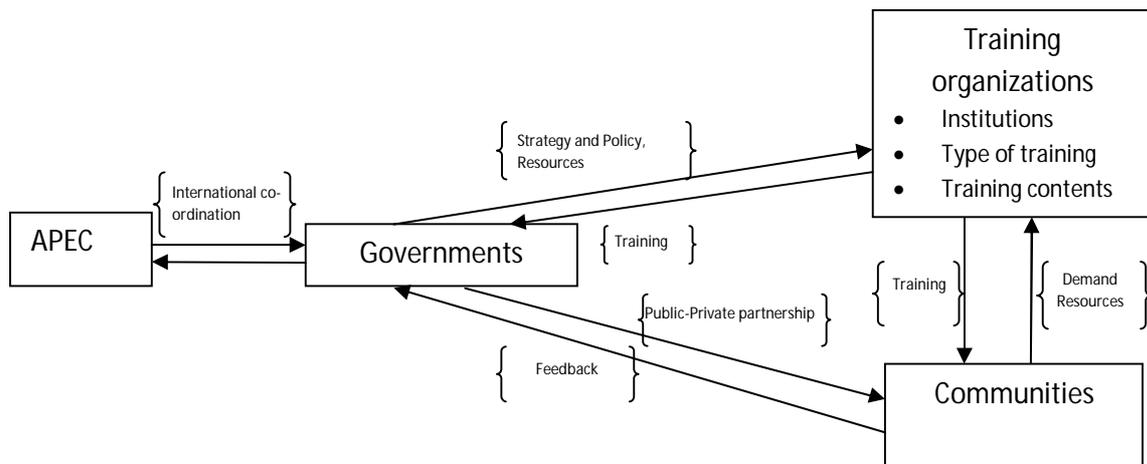
*To provide the foundation for APEC economies to enhance their training competencies in the field of “ICT applications and elderly/disabled people”.* The capacity model will guide trainers, healthcare employees and government staff on competencies needed to provide ICT training for elderly and disabled people. These competencies can range from the development of practical training courses to provision of accessibility equipment and enforcing of guidelines and regulatory frameworks to support activities.

*To coordinate the focusing of resources to training competencies in the field of “ICT applications and elderly/disabled people”.* One objective of the model is to assist trainers to mutually coordinate their training programs. Thus, the creation of overlapping initiatives in various levels of activity is prevented and resources are channeled effectively.

To enable the exchange of information and best practices among the national elderly/disabled people ICT training task forces as well as the trainers and government staff that are the interest groups of training. While training should be based upon national standards and adapted for national conditions, it is expected that the challenges faced by APEC countries are similar. If the necessary organization is built on the APEC level, crucial information on the success and failure of individual efforts may be exchanged, greatly facilitating future initiatives in each APEC country.

## 2. The APEC capacity building model

Figure 1: The APEC capacity building model



### 2.1. APEC

In general, it should be noted that governments should provide a number of initiatives in order to develop training programs in this area. However, some economies have no resources for complex and full training of government officials or member of communities even at different levels. In such a situation the international cooperation could play a key role in training the trainers. It is recommended that in the area of pursuing regional collaboration among APEC economies, a strategy to promote such efforts should be included in the TEL Ministers Declaration and the existing initiatives should be developed further. For example, the APEC initiative “ICT application for people with disabilities” deserved to be developed further. This initiative could be developed at multilateral cooperation or bilateral cooperation on which is adaption of the results of multilateral cooperation to the domestic demands, taking into account the differences in demography, culture, society and legislative regulations etc.

### 2.2. Governments

#### 2.2.1. Strategy and Policy

Government needs to recognize with the proper strategies and policies on “ICT applications for people with special needs”, it can gain a lot of benefits. In an environment where resources are committed to “ICT applications for people with special needs”, economic

benefits can be realized. The corporate sector can receive a boost from the previously untapped markets.

Therefore, ICT development strategies should not leave out of the stakeholder: “people with special needs” (i.e. seniors, out-of-school youth, persons with disabilities, as well as other marginalized groups). Moreover, ICT strategies should be designed to empower and to motivate these people to assume greater social and economic responsibilities.

It is imperative the government recognize the importance of the training the trainers for “ICT applications for people with special needs” programs , give it appropriate weight, plan policies around it, and disburse funds to achieve the education goals. Government needs to make a conscious effort to work through the education system in order to impart an understanding of, for example, the need of ICT applications for elderly and disable people. In short, the responsibility for the management of “ICT applications for people with special needs” ultimately resides with government. Each country has its unique needs and milieu, however, according to which the administration must find solutions.

### *2.2.2. Resources*

Because of large resource differences between the APEC countries, it may be desirable to agree on establishment of certain types of particularly resource-intensive pilots only in certain member states in order to learn from those initiatives. Thus, the whole of APEC need not multiply effort when the effect of the program is not yet known. In that case, it is necessary to share experiences and move ahead with implementing follow-up projects in others member states if pilot results look promising in these countries. It is also useful to establish support, advice, and aid available for this purpose from international agencies such as APEC and its regional partners.

#### *Financial Resources*

The importance of this “core” resource component cannot be stressed enough. The existence and sufficiency of a training budget is at the foundation of any training capacity. The lack of financing is often mentioned as a barrier for elderly and disabled people in using ICT applications. Many older people have small pensions and cannot afford to pay for ICT products, training courses or learning resources and tools. Financial support from governments is also scarce.

#### *Physical Resources such as classroom, materials, supplies and equipment*

Training courses require accessible and available venues with the necessary equipment (i.e. power, lighting, acoustics, seating capacity, and equipment). There also should be appropriate and sufficient materials for participants, as well as a maintenance system to replace and upgrade them.

#### *Human Resources*

Trainers and preceptors need to have updated and standardized technical and presentation knowledge and skills. However, in the case of training for elderly and disabled people, the skills of staff should be upgraded to accommodate the needs of these special groups. For

example, how to teach using special accessibility equipment, and how to utilize suitable teaching methods for elderly people requires completely new training for these trainers

### *Curricula and Training Plans*

These are crucial resources which will be discussed more detail below. Training institutions should frequently standardize and update the official curricula and periodically review all training plans. Best practices from other initiatives should be used whenever possible to design the curricula.

## **2.3. Training Organizations**

### *2.3.1. Institutions*

Nationally, it is possible to realize various types of training. This can take the form of e.g. awareness promotion among the trainers, specialized on-the-job training programs, national seminars and get-togethers for practitioners and comprehensive courses. However, it is unlikely that all of these training events will be realized for every country. Thus, different approaches should be applied to provide the training courses for government officials or communities of people with special needs. For example, in some APEC member economies, programs can be provided by education centers and institutes while in others the government can take responsibility for teaching its own officials. Some APEC countries may choose to arrange the training under contract with private companies and non-profit organizations.

Establishing formal public private partnership (PPP) can improve the quality of training and evaluation activities. This partnership aims to provide resources and education to help communities identify and gain access to certain services and programs that will meet their needs. Community Information Centers should be created or used to help achieve the aforementioned objectives of the training programs. For example in Sweden, there are adult learning centers which are also very important for the training of older people. These learning centers are linking local communities and different stakeholders. They are an arena for local development and growth (business, support of NGOs, community work, participation of older people, etc.) and a space for all kinds of formal and informal learning (tutoring, guidance, stimulating learning environments, e-learning, technology support etc.) (Ala-Mutka et al., 2008). In short, depending on the circumstances of the economy, the training organizations can be located in government organizations, international organizations, training centers or universities. PPP should be developed to create advantage for different actors, with mutual networking having a very central role to involve all stakeholders in not only carrying out activities but also defining their content.

### *2.3.2. Types of training*

Similarly, the types of training can vary; e.g. seminars, symposiums, conferences, trainings and study visits are all possible. Based on experience of previous training projects, short term courses and seminars are a useful training method for government officials in both theoretical and practical areas. Special programs for government officials should be developed in conjunction with short-term (e.g. 2-3 days) seminars which can be conducted systematically. Longer, 1-3-week courses with guiding experts on practical issues would encourage trainees to discuss and search for solutions more in detail. One important facet of this hands-on training could be international visiting trainers who could disseminate best practices from other initiatives. In addition, distance learning methods could be developed. Due to

limitations in finance and other resources, long-term courses might not involve a large number of officials. However, distance learning courses might fill this gap since they save expenses.

### 2.3.3. Training Content

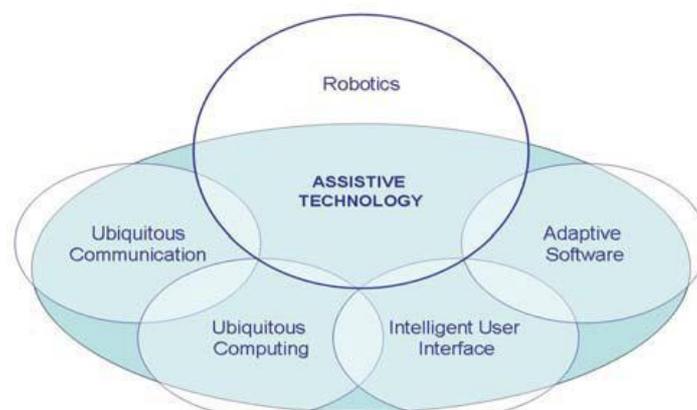
The training programs to be developed as a result of this initiative should be as comprehensive and effective as permitted by resource commitments to support “ICT applications for people with special needs”, but conform to specific domestic needs. Where possible, the implemented curricula should be based on the results of scientific research conducted by academic institutions. Practice-based examples, case-studies and recommendations can also be used for training programs. Furthermore, it is necessary to systematize the training programs and establish the relationship of these courses to existing training programs.

The curriculum should include but not be limited to the following topics: the use of special assistive ICT for elderly and disabled people, special teaching methods for elderly and disabled people, review of legal guidelines and frameworks for practitioners on ICT and elderly/disabled people, the examination of the guidelines available for policy makers, the discussion of best practices or good examples, and the introduction of the ICT products and services which are available and affordable. The below discusses some of these topics.

#### a. Introduce “ICT applications for people with special needs”

ICT innovations can help “people with special needs” to feel well and stay longer at work or improve their productivity. Previous work has proposed various classifications of technology functions. For example, Cast (2003) clustered ageing-related technological innovations into four categories: Enabling Technologies, Operational Technologies, Connective Technologies, and Telemedicine. The Senior Project (2008 e) addressed the different fields of ICT for elderly as presented in the figure below (cited from 7<sup>th</sup> Framework program, 2012).

**Figure 2: ICT for elderly**



**Source: Seventh Framework, Needs and Trends Analysis Report: Golden workers, 2012**

The report of the 7<sup>th</sup> Framework Program concluded that the most relevant technologies for people with special needs could be: (1) Ambient intelligence, (2) Augmented and virtual reality, (3) Affective computing, (4) Robotics, (5) Internet, (6) Invasive technologies, (7) Quantum computing, and (8) Design approach. These categorizations can be used as references when designing the content for the training program which introduces applications of ICT to meet the need of elderly and disable people. However, this report emphasizes that training itself to overcome the digital divide among young and old should be the aim of interventions. Merely providing new healthcare-related technology for elderly and disabled that does not give access to the information society is not sufficient to bridge this divide.

*b. The participation of “People with special needs” in designing ICT applications*

The participation of “people with special needs” in design plays an important role in the success of ICT programs for them. Disabilities occurring as a result of age are typically associated with mobility, eyesight and hearing that are the most important senses for current ICT products. It may not be easy for designers to image the needs of elderly and disabled people unless these people participate in the design process. Contemporary ICT design also emphasizes the end-user participation in design and there should be no barrier to include also these special groups in the process.

*c. The “ICT applications for people with special needs” road map*

It is very important for policymakers to learn how to build the ICT roadmap to advance training for elderly and disabled people. There are existing models available (e.g. AALiANCE, ePAL, BRAID). For example, The AALiANCE roadmap (2009) emphasizes the specific use cases for ICT in the workplace:

- To facilitate access to workstations;
- To assure the right working conditions related to the environment and personal situations;
- To support work activities;
- To prevent and reduce the prevalence of work-related diseases;
- To supply tools for tele-working;
- To provide safety and health regulation for employees

In their road-map strategy, ePAL (2010) identified four fundamental ICT-related areas (i.e. Collaborative Networks, Affective Computing, Soft Computing, and Machine Learning) in need of further research and development for support of the specific requirements and characteristics of elderly people. The knowledge from this review can assist government officers in building the ICT roadmap for their own countries and developing the training strategy and policy.

*d. The socio-technical challenges*

New ICT technology may provide ways to support “people with special needs” in all aspects of their life but the technology may also introduce challenges. For example, new ICT solutions can be especially challenging to ageing employees because they may require changes in work routines and practices, and they may require learning new things (7<sup>th</sup> Program Framework, 2012). Technology and societal changes go hand in hand and it should not be assumed that the introduction of technology alone will make things right. Therefore, it

is necessary to assist the recipients of the training and the community to prepare for the future changes which might cause by applying ICT in their life. Perhaps in this aspect, research may best inform policymakers and trainers. All changes cannot be foreseen but pilots can provide an early guess of the changes that would be coming should more wide-scale implementation occur.

*e. The best practices*

This topic covers good examples for use in e.g. APEC discussions forums, expert training and workshops, but currently, they are not yet available. This topic will be discussed in the future when pilots have been implemented and lessons have been learned.

*2.3.4. Training Material*

It is necessary to increase scientific research on “ICT applications for people with special needs” in order to have recommendations for trainers to provide training to government employees and the community. The training process should actively use different types of related educational materials such as those devised for rehabilitation of elderly people, adult/lifelong education and those for education for people with disabilities. While such materials do not directly address the ICT training need, they can inform the education process greatly.

Another important material source for training programs which should be developed is a web site. The web site stands as a knowledge base which consists of reports, articles, documents, best practices compilations and other literature relating to “ICT applications for people with special needs” as well as links to all initiatives as well as supporting organizations within APEC. The website can also be a vehicle through which interest groups may continue online dialogues and on various issues arising from the use of ICT in building the capacities for people with special needs.

**2.4. Communities**

The elderly and disabled people are the end beneficiaries of these initiatives. Therefore, before any action is taken, it would be best to investigate the actual needs of these groups in more detail. After all, if implemented correctly, it is these people who drive the initiatives. They might be seen as beneficiaries of government and international resources but they are also providing some of those resources by acting as important market participants. This aspect should not be ignored by training programs.

**3. APEC Training model**

**3.1. Training program for the trainers**

As stated above, there is a shortage of the trainers (or educators) who can teach ICT for elderly people. Thus, it is necessary to provide training courses for trainers who can have a background as e.g. educators, social workers, government officers, ICT experts and volunteers.

Professional trainers would need training for the technical issues and, if these trainers have not previously taught to old people, they would also need to understand the requirements of elderly people.

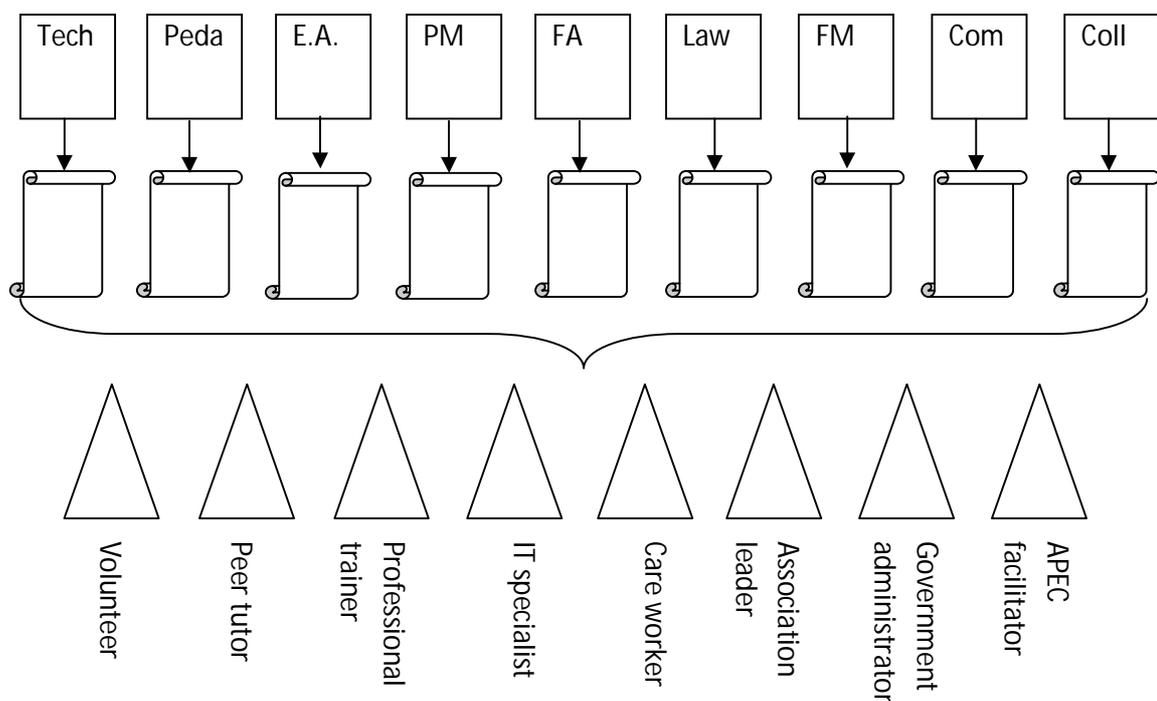
IT specialists would need focusing on the teaching and training issues as well as how to take old people in account in their teaching. Care workers would need supplementary technical and teaching competencies. Government officials are assumed to act as facilitators and would need to only understand the outline of the training provided to old people.

A peer teaching model has been proved as an effective method in training elderly people. Seniors who already have some experience in ICT use (from their work or other training courses) are trained to work as tutors who help their peers in learning ICT skills. Volunteers and peer tutors would need training for technical issues as well as training on teaching/coaching and tutoring. In addition, they would need to understand the specific requirements of old people for teaching these issues.

In addition, as also stated above, ICT training for elderly people requires project managers to lead the associations where trainers work, people in the administration to coordinate government responses and government-NPO links, and APEC coordinators/facilitators to coordinate learning and the exchange of information between APEC nations. These groups also need to have their own training courses.

As mentioned above, it is important to organize the survey in order to understand the need of seniors and then design the most relevant courses for both trainers and elderly people. The following figure 2 describes the example competency areas that should be taught to would-be trainers. The boxes on the first row denote these competency areas with acronyms that are explained below the figure. There are a number of courses attached to each competency area, and these may be combined in various ways to provide suitable packages to each trainer group (triangles on the lowest row). Figure 2 also includes the competency areas that can be useful for facilitators.

**Figure 3: Curriculum for trainers and administrators**



Competency areas

- Tech: Technical training
- Peda: Pedagogical training
- E.A.: Elderly people awareness, gerontological training
- PM: Project management
- FA: Funding acquisition
- Law: National legal framework for elderly people
- FM: Field research methods
- Com: Competency identification and transfer
- Coll: Collaboration with other organizations and associations

Next, we show how the competency areas listed above could be divided among the trainers and facilitators. These examples can be used as the foundation to build specific curricula for each group. The assumption is that each group shall be trained to be equally capable of conducting training for elderly people on ICT, thus, the competency requirements from each group when they have finished training will be the same. However, it may be desirable to implement special roles for each group depending on their background knowledge. In that case, specific curricula may be modified.

Example training curriculum for trainers

<b>Peer tutor/ Volunteer</b>	<b>Prof.trainer</b>	<b>IT specialist</b>	<b>Care worker</b>
Technical training	Technical training		Technical training
Pedagogical training		Pedagogical training	Pedagogical training
Elderly people awareness	Elderly people awareness	Elderly people awareness	

The example below shows how competency requirements can be drafted for facilitators to prepare training curriculum for each group. Here, the need of each group of facilitators differs considerable, and hence, the competency requirements also differ.

Example training curriculum for facilitators

<b>Association leader</b>	<b>Government admin.</b>	<b>APEC facilitator</b>
Project management	National legal framework on elderly people	Project management
Funding acquisition	Collaboration	Field research methods
Collaboration		Competency identification/transfer

### **3.2. Training programs for elderly people**

The target group “senior citizens” for training can be divided based on

- ICT knowledge levels
  - Beginners (e.g. who have never used Internet)
  - Intermediate learners (e.g. who know how to use Internet from their professional life, and want to transfer it to their interests as senior citizens)
  - Advanced learners (e.g. who acquire ICT competences)
- Age, gender, training format
  - 50plus, 60plus, ...
  - Male and female
  - Formal or informal education

As a result, it is recommended to design different courses for different targeted groups in order to attend the seniors’ learning interests as an example below

Example of courses tailored to target training groups

<b>Beginners</b>	<b>Intermediate learners</b>	<b>Advanced learners</b>
Basic course on computer use	Review course on computer use	Computer updating course
Photo management basic course	Applied software programs (e.g. Family tree program course)	Information security course
Internet use course	Email use course	Internet map services course
Basic course on word processing	Spreadsheet course	
	Internet telephony course	

#### *Course for beginners*

This should include training on the first access to the Internet and the explanation of the use of the browser (e.g. favourites list). Usual terms should be explained with practical examples (e.g. “links”). As seniors want to use the Internet meaningfully the use of basic functions of search engines should be shown. Seniors must be aware of security matters, so this should be content as well. Standard websites should be shown (like news, practical advice sites (e.g. health, events)).

#### *Intermediate learners*

This should include the training course on “communication” or how to find “useful information”. The “communication” courses introduce emails, email attachments (like pictures), mailinglist, chat, discussion forum, Skype, Flashmeeting. Moreover, with the help of the Internet and accompanying aspects, the seniors can learn how to find useful websites (e.g. about travel destinations, about booking tickets, for events, but as well hobbies like digital photography).

#### *Advanced learners*

Seniors can learn about the advanced use of search engines or web catalogues and other Internet application such as online shopping, e-services. For example, the use of search engines to find online book shops for interesting literature could be shown. Then buying books in an online store could be explained. Aspects of paying (directly at the shop, online banking, and security) could be demonstrated. At last the download of e-books and online discussions about the books’ contents with other seniors via the forum could be explained.

### 3.3. *Training methods*

The universities of the Third Age, which are popular in Europe, Australia and US, are active in providing the ICT training courses for elderly people. Thus, the training for both trainers and elderly people can be carried out in these universities. It is recommended that the members of APEC should research the model of the University of the Third Age and consider the possibilities of implementing this model in their countries.

Furthermore, the establishment of ICT Associations for seniors can be supportive for the government in training the elderly people. These associations can provide activities such as technical help, club activity, e.g. photo editing club, study tours and visits to organizations, and links to other associations providing help and library courses. The training can also be at home, care-centers or library and e-learning.

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@Japan model for e-learning.

Video conference between Waseda University and NUS via polycom

Joint seminar between graduate students of both universities at their classes- Friday afternoon in any Friday in July or lectures by professors for each class for 60 minutes We have lecture classes every Friday in the semester term as the program with speakers undergraduate students.

## Convergence between Super Ageing Society and Information Society

Courseware and curriculum by Director; Dr. Prof. Toshio OBI

	Lecturer	Position	Theme
1	Toshio OBI	Dr. Professor, Waseda University	Orientation & Theory of Convergence between Super Ageing Society & Information Society
2	Masato TANAKA	Manager, NTT DATA	Formation of Future Ageing Society
3	Naoko IWASAKI	Dr. Institute e- Government, Waseda University	Silver ICT Business and the Disaster Management in Ageing Society
4	Akira WATARI	Director, Toyota Motor Company	The role of e-mobility for Super Ageing Society
5	Mikio IHORI	Senior Researcher, Tokyo University	The role of e-Municipality for Ageing Society
6	Ladovico Ciferri	Researcher, Torino University, Italia	The Activities of Ageing Society in Italy
7	Toshio OBI / Kosuke TAKIGUCHI	Dr. Professor, Waseda University / NGO Community for Silver Ageing	The Activities of NGO
8	Katsuhisa KOJIMA	Director, National Institute of Polulation and Social Security Research	Reality of a super-aged society in Japan

9	Makiko YAMADA	Counsellor, Information and Communication Bureau, Ministry of Internal Affairs and Communications,	The role of ICT for Ageing Society
10	Sadahiko KANO	Dr. Professor, Waseda University	e-Health and Ageing Society
11	Yasuro TONEGAWA	Deputy Director, JapanRailways East	CSR and Railway Business
12	Minoru ARAI	Executive Officer, Japan Railways East	Technology Innovation from the aspect of Railway company for Ageing Society
13	Masaki KITAJIMA	President, International University of Health and Welfare	The Reality and the Future of medical and welfare in Super Ageing Society
14	Kuniko INOBUCHI	Member, House of Councillors (SENATE), Former Minister of State for Gender Equality and Social Affairs	The ICT solution for Ageing Society
15	Toshio OBI	Dr. Professor, Waseda University	Conclusion and Examination