



Det Kongelige Danske Kunstakademiske Skoler
for Arkitektur, Design og Konservering
Arkitektskolen

Philip de Langes Allé 10 Tlf. 3268 6000
1435 København K Fax 3268 6111
Danmark info@kadk.dk

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The best way to predict the future is to invent it
Computer Scientist Alan Kay

Shaping activity- and health-enhancing physical environments for multi generations

The workshop *Shaping activity- and health-enhancing Physical Environments for seniors* has two objectives:

1. To see the rising numbers of seniors as a huge resource instead of an economic burden, and
2. To understand how preventive design can contribute not only to a better physical and mental health of the individual, but also to increase physical activity and social interactions in the public space.

Japan and Denmark

Japan and Denmark are two very different countries in terms of culture, geography, weather, welfare systems and city planning. Nevertheless, we are also very much inspired by each other when it comes to food, art, architecture, and high-tech welfare solutions.

Every month, Danish nursing homes and care centers have visits of Japanese delegations who want to learn about elderly care in the welfare society cradle of Scandinavia. They bring a lot of useful inspiration back home to Japan.

But also Scandinavia can learn from the East. In Japan a lot of new technology in robotics and advanced lifts have been developed that not only the domestic elderly sector can benefit greatly from. In 2013 Japan was visited by The Danish Parliamentary Committee on Social Affairs, and the purpose was to study the Japanese welfare technology which can make daily life easier for the elderly and disabled. Several Danish universities and public institutions have collaborated with Japanese companies in connection with welfare technology. Denmark is so firmly integrated into the Japanese consciousness when it comes to robot testing, that researchers at Osaka Robot Laboratory actually have stated that "Funen [the third largest island in Denmark with an area of 3.100 km²] is a European Silicon Valley in robotics and welfare technology".

Ageing societies

According to Arup et al (2015) in 2050, 70% of the world's population is predicted to live in cities, and the number of people aged over 65 are expected to triple to 2 billion, representing 22% of the total. In 2050, for the first time in human history, the number of older people will be greater than the number of children under 15 years old. China, India and the United States, will each have over 100 million people aged over 65.

New population figures from Japan show that 26.7 percent of Japanese people are over 65 years old. In 2015 it was the largest share of plus 65-year-old ever and the largest share in any industrialized country in the world. It is the highest proportion of 65+ ever in Japan. The proportion of elderly people in Japan



will inevitably continue to rise dramatically in the coming decades. In 2060, pensioners over 65 years old constitute nearly 40 percent of the population, and Japans total population will have dropped to 86 million from the current 127 million.

Figures from Statistics Denmark show that the population in total was 5,699,220 people in 2015. Of these, 1,051,129 individuals were 65 years and older. That is “merely” 18,4 percent of the total population. But predictions from Statistics Denmark's country projection looks very much like the Japanese data: 25 percent will be over 65 years in 2042, and in 2050 Denmark is still just 6 million citizens.

Shaping urban spaces for multi generations

When it comes to spaces and environments for the "new and slightly older seniors", it is a field we know very little about. Three large observational studies of seven activity spaces in Copenhagen carried out by the Academy of Fine Arts, Schools of Architecture, Design, and Conservation, and University of Southern Denmark show that seniors in these selected places were almost absent. On a global scale and to our knowledge there are very few public spaces with seniors 65+ as its prime target group.

With the elderly as an increasing proportion of the population in the coming years there may be achieved great social and personal gains if more seniors through physical activity and social meetings can be self-reliant in their own homes for a longer time, thereby increasing the quality of the last years of life.

When seniors continue an active lifestyle it is often characterized by *flexibility*. It might be because the majority of elderly people are outside the labor market and therefore can be more flexible.

Accessibility and *safety* in public spaces are important. For the less mobile elderly the possibility of easy transportation to the site or close to home leisure activities will encourage both daily exercise and frequent social actions. To support this the sense of security in the local area is of great importance. The characters of urban areas have an important role in building the capacity of older people to live active and fulfilled lives. *Proximity*, meaning distance of facilities, services and all urban resources, facilitates older people to walk everyday through the streets of the neighbourhoods in which they live. The benefit is double sided: in fact, proximity of facilities encourages both daily exercise and frequent social interactions.

Finally, *diversity of facilities and locations* increases the willingness to live an out-door life, and, as a consequence, the possibilities of human encounters. Public spaces represent social infrastructures that can be designed to enable people to practice a wide range of activities, challenging the natural loss of physical functioning and the tendency for social isolation.

As architects intelligent urban design is the discipline that allows us to measure and adjust the processes described above, and to read and imagine an urban landscape, where elderly people can fully realise their rights and benefit from the opportunities of social and out-door active life that cities offer of a full urban life.

Project brief

Tokyo is one of the most liveable cities in the world. Contrary to its classic rumour of consisting of millions of tiny “rabbit hutches” it is very humane, clean, safe, has a vibrant urban environment, and an international atmosphere. This design studio class has as its objective to produce ideas that will increase the use of urban spaces in Tokyo. The project has three scales: 1. Ward, 2. public space, and 3. elements. It is essential to explain each of these three scales in the presentation. At four urban sites in Jiyugaoka we encourage you to come up with ideas and suggestions that will improve public space for an aging population. Students are welcome to mix the programs, so that the design, for example, in-



cludes intergenerational activities, urban gardening, body cultural activities or other catalysts for activity promoting activities. The public space can include smaller pieces of architecture or impact points.

We know that Japan often has “dramatic” weather conditions: typhoons, heat waves, heavy rain- and snowfall. Besides this, the country is occasionally hit by natural disasters such as earthquakes and tsunamis. Therefore, the students should design elements, which protect the users from these extreme weather conditions. Ideas will be discussed in class and each student will pursue a main idea through the entire design process. Most important are the ideas and the communication of these, not the actual technical solution in 1:1.

The following drawings and models are required as a minimum:

Site plan including adjacent areas 1:1.000

Plans, elevations, sections 1:200

Details (partials) 1:50

Perspectives and other illustrations to illustrate the main ideas

Physical model 1:200

If necessary structural model 1:50

Schedule (may be modified)

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| October 11 th | 13:20 Lecture by Guest Professor René Kural.
15:00 Review and esquisse check. Discussion about the topic and assignment. |
| October 12 th | 13:20 Presentation of individual projects, discussions and development of ideas. |
| October 13 th | Work on the assignment. |
| October 14 th | 13:20 First review based on short presentations of developing ideas. |
| October 17 th | Work on the assignment. |
| October 18 th | 13:20 Midterm review of two studios with professors. |
| October 19 th | Work on the assignment. |
| October 20 th | Work on the assignment. |
| October 21 st | 13:20 Esquisse check by teaching assistants. |
| October 24 th | Work on the assignment. |
| October 25 th | Work on the assignment. |
| October 26 th | Work on the assignment. |
| October 27 th | Work on the assignment. |
| October 28 th | 13:20 Third review based on short presentations of developing ideas. |
| October 31 st | Work on the assignment. |
| November 1 st | 13:20 Final review before final critique. |
| November 2 nd | Work on the assignment. |
| November 3 rd | Work on the assignment. |
| November 4 th | Submission of drawings. Students work on the physical models. |
| November 7 th | Work on the assignment. |
| November 8 th | 13:20 Esquisse check by teaching assistants. |
| November 9 th | Work on the assignment. |
| November 10 th | Work on the assignment. |
| November 11 th | 13:20 Final critique. |



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Bibliography

Arup, Help Age International, Intel, Systematica. *Shaping Ageing Cities. 10 European case studies.* Arup, 2015.

Kural,R. Changing Spaces for Sports.

In: *Sport in Society.* Routledge, vol. 13, no. 2, March 2010, pp. 300-313.

Ratti,C., Claudel,M. *The City of Tomorrow: Sensors, Networks, Hackers, and the Future of Urban Life.* Yale University Press, 2016.

René Kural, Guest Professor at Tokyo Institute of Technology

Director of *Activity- and health-enhancing Physical Environments Network (APEN)*

PhD, Associate Professor, Architect MAA