How Do We Live

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1 ABSTRACT

Nowadays, technology is everywhere, in our homes and working areas, we even carry a lot of electronic technology with us. It is one of the most used notions and a part of life. Our houses also have a lot of electronic technology, it relieves our lives. Technology can also make our space more comfortable, saves our time in many ways. However, technology can not physically enlarge or replace our spaces. Flexibility is an essential component of our lives, increases our space and allows the most possibilities through the changes of our lives. It remains a part of our lives and complements our space. How do we live today between a lot of technology and often a lack of living space that many people have? A smart addition of these two components, technology and flexibility would be an ideal combination.

Keywords: smart living, function, flexibility, technology, housing

2 TECHNOLOGY AND HOUSING

Technology is one of the most mentioned notions; it is also connected with the way we live. All the technology that accompanies us every day has become an inseparable part of our lives and our living spaces. Even in our narrow areas of life, technology helps us to do our everyday tasks faster and more efficiently, so that we are often made better by the technology, but at the same time stressed and over-strained.

If we have not enough space, technology my help us to feel better, like by using a better light or a different kind of technical features. A smart home, can be understood by a lot of technology within and around the house.

Can smart homes be the answer to the challenges of urban living through "smart technologies"? Does it help to replicate the space that is missing? For sure technology is important. Do our homes need so much technology? Is that what people need the most? Or is technology or different building techniques needed just for some of the cases? What is really the aim of living? For sure it is great to live in a smart house with a lot of technology and automation, but it is not something that everybody can afford. What's the percentage of people that can afford this? Better said, what is the percentage of the people that have a flat with enough space and number of rooms that can meet their basic needs first? What do people need the most? What is really smart, to achieve enough space for people to live, or to have a lot of technology in the house?

2.1 Household

The housing market has become tense in many aspects. Large cities complain about housing shortages, increasing conversions of flats into private property and rising rents. There are solutions that are urgently needed in most major cities; on one hand there is need to maintain the existing number of apartments, but on the other hand there is a need to find solutions for affordable housing. It is important to achieve a comfortable lifestyle in the big cities, so that the quality of living does not get lost. There is value in securing the quality of living, but it must be improved as well.

According to Statistics Austria, Family and Household Statistics 2016, there is a strong increase in one-person households, "in the last 30 years, the number of private households in Austria increased by 37%. The reduced average household size also played an important role: 30 years ago, a household still had an average of 2.66 people, compared to only 2.22 people in 2016".[1]

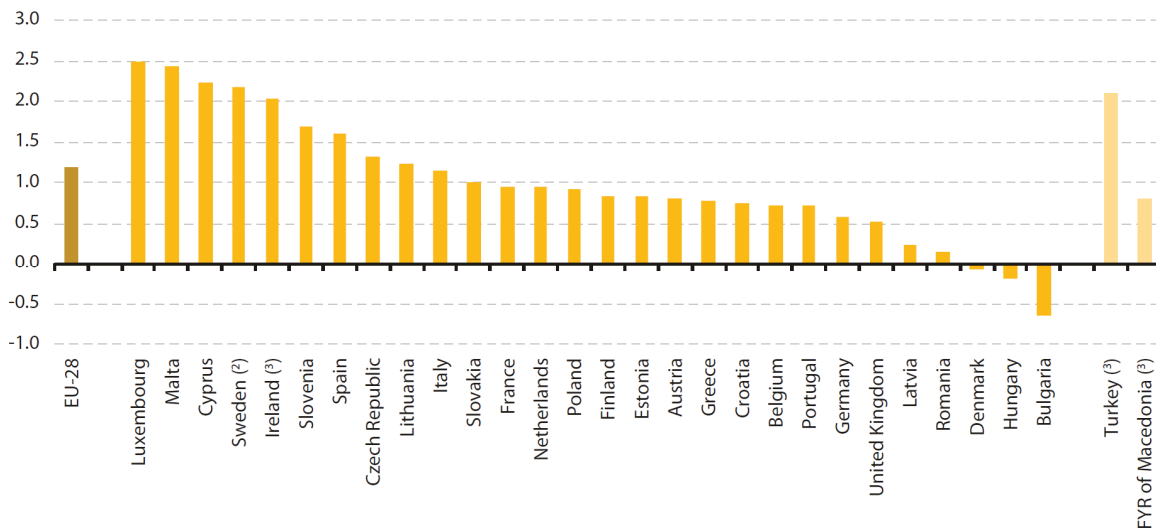[1] http://wohnservice-wien.at/wohnen/smart-wohnen, 2017

Fig. 1: Distribution Annual average change in the number of households, 2005–13 (1) (% per annum)

Source: Eurostat

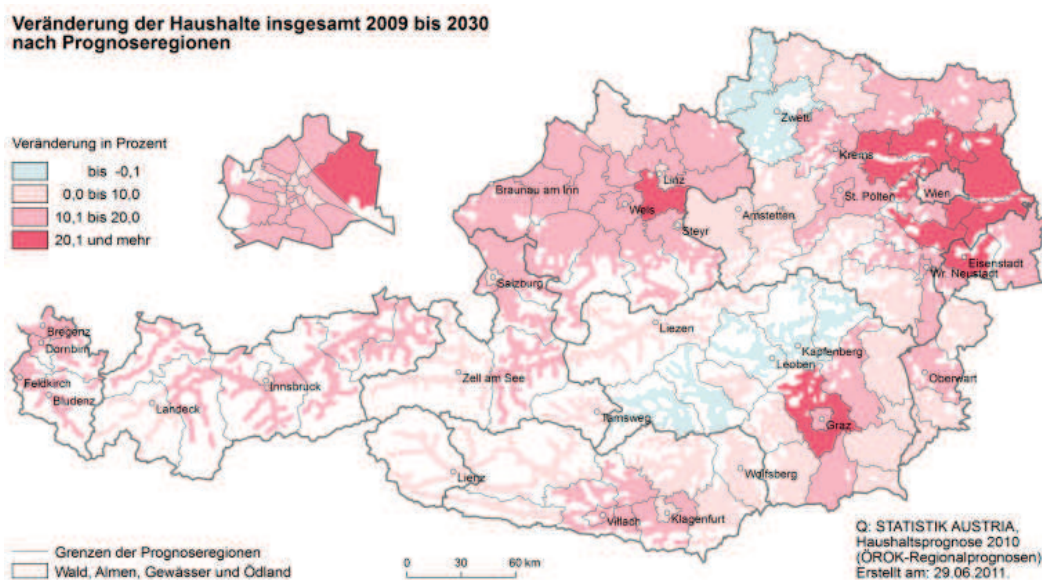Fig. 2: Changes in the number of households, A-2009–30, Source:https://www.statistik.at

In this sense, there is an increased demand for smaller apartments "The proportion of single people living in private households increased from 10% to 17% over the same period, with the largest group of single people aged over 65, one-third of whom lives alone in a private household. In the 25- to 34-year-old age group, 20% lived in one-person households".[2] As a result, there are more households with smaller household sizes.

In a dynamic life, with relatively rapid changes, as a result of relatively rapid developments in the cities, demographic changes, changes in families, a new approach is needed for finding solutions for housing. At the same time these solutions need to be able to be transformed or altered, depending on life expectancy or changes.

A fully transformable apartment should not cost more than a standard or conventionally planned apartment.

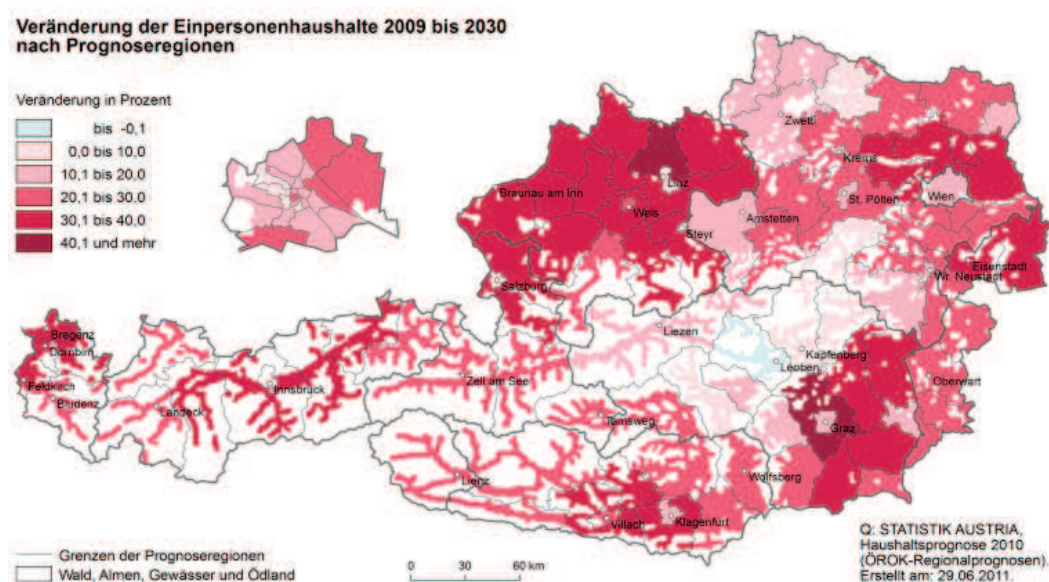[2] Statistik Austria, Familien- und Haushaltsstatistik 2016

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DIMINISHING SPACE

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Fig. 3: Changes to one-person households, A-2009–30. Source: https://www.statistik.at/

3 SMART HOUSING[3]

"The City of Vienna has developed certain programs to make housing affordable, so that the housing follows to the people's needs. An example of this are SMART apartments. Every third subsidized apartment built in Vienna, is designed as a particularly cost-effective SMART apartment, whereby compact, cost-effective living so that every square meter is used optimally". In the equipment and in the open spaces to allow additional individual scope and added value for the residents. "SMART apartments are available in different sizes with 1, 2, 3, 4 or 5 rooms. They are a bit more compact than the classic subsidized apartments and, thanks to their good and compact layout, offer a comfortable living experience, especially more cost-effective apartments".[4]
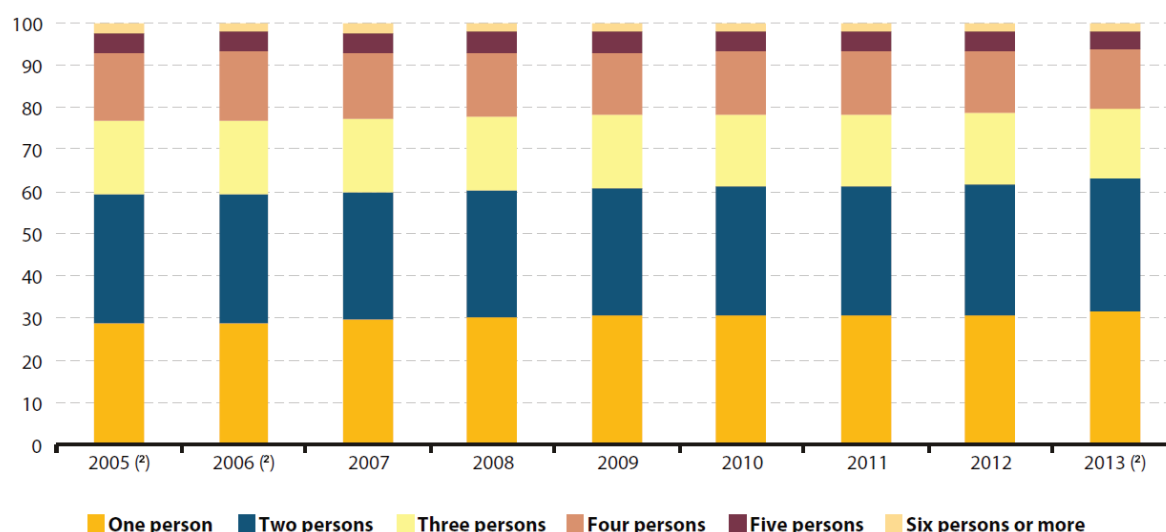

Fig. 4: Distribution of households by size, EU-28, 2005–13 (1) (% of all households). Source: Eurostat (online data code: ilc_lvph03)

4 SMART APARTMENT VERSUS FLEXIBLE APARTMENT

However, the Viennese SMART apartments are reaching their limits, on the question of flexibility outside the first stage of use of this apartment. It is very difficult to alter a first stage apartment later on if there are changes in the family structures.

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[3] http://wohnservice-wien.at/wohnen/smart-wohnen, 2017
[4] http://wohnservice-wien.at/wohnen/smart-wohnen, 2017

The concept of "SMART apartments" is directed towards a solution that has a larger number of rooms in the minimal possible space; meaning a small space, would have as many rooms as possible. Later changes in the floor plans, due to changes in the family structure, are unlikely since most of the apartments are very rigidly built, in the first place. Thus in the case of rented apartments, changes are almost impossible and rarely happen.

Financing versus construction costs: how smart are the "SMART apartments". Although, they should cost less (for the tenants or buyers), since a small space means more flats should be available, they aren't always. This can work only if the city has the prices for this type of apartments under supervision, e.g. with demands etc. In reality, even SMART apartments are more expensive; the construction costs are higher when compared to a residential complex with the same total area, in which each apartment would have a larger footprint. Reason being is that the total number of bathrooms would increase for this building and investors in SMART apartments will not find this investment lucrative, to a certain extent.

Build affordable living spaces not only for profit, but for the environment too. Intentionally create a long term suitable and useful apartment that can be easily repurposed without having to move out, because of the changes in our life.

There is a need for creative ideas in apartment designs that do not cost more than a conventional way of building-planning, so that developers find these new ideas acceptable on a voluntary basis.

As we know from practice, the stricter the guidelines are and the more precious the apartments are, the more resistance is expected from property developers.

5 LONG TERM FLEXIBILITY OF HOUSING

How does a SMART apartment react to changes in life and in family structures? How customizable are our apartments? SMART apartments, are a very good beginning idea and solution from the City of Vienna, but it should be modified and further developed.

Appropriate standards and guidelines have long been dubbed the "adaptable housing" and regulated so that a person does not have to change his apartment. In the case of a disability, a new apartment must be easily altered into a handicapped accessible apartment.

Like with other changes in life, such as changes in the family structures, the family gets bigger, etc., in most cases, the apartment is too small, so a change of residence is required. A change of residence often takes a larger apartment and is associated with high costs. Therefore often, larger families will live in a confined flat, often missing one or two rooms, to avoid paying the additional expense.

In response, SMART flats allow for flexible floor plans that could be easily changeable in later times. Floor plans that are very easily changeable and not inexpensively adaptable should be able to follow our life changes.

Planning is not just a kind of tool used to achieve as much square meters or rooms as possible, but it is a strategy as well. A strategy that we can use to make our living space adaptable on our road of life. A well designed flat can achieve a better architecture by allowing for very easy change at a low cost to parallel changes in different living situations.

This issue is very important; being aware of what is to come in the future is also very important and that is why the planning has to be done in this way according to the building law. If we want to make a similar kind of offer for flexible flats, through rigid laws and regulations over the planning, architects would lose the flexibility on planning, which would not be very reasonable.

There are many good planned flexible flats, for example, with sliding walls etc.

It is a good way of adapting the space constantly, at any time. Except this way of planning becomes a cost issue that cannot be approved on every building, especially on SMART flats.

Technology is a bit too much talked to us. It brings a lot of good and it is also exaggerated to a proven extent. We can achieve a lot with technology; it makes life a lot easier, but also more difficult.

Through technology we can virtually visualize our spaces into which we can also move, modify and complement, etc., but only virtually. In reality, the spaces remain as they are, unchanging from the size. We

can change the color, refurnish and decorate, even move the walls, but all within the scope that we are in, to specific and known limits, but not beyond and very much connected with the costs.

The limits of the space we have remain unchanged, during which we can change the spaces we have disproportionately with each other.

Therefore, it is very important to treat the space virtually, while thinking realistically. If possible, try to erase the boundary between the virtual and the real world, in a way that we can achieve a certain flexibility by working to adapt the spaces to each other as needed. The result of merging them together or connecting them with each other will bring all this technology closer and make it available to the users of apartments in a useful form allowing flexibility in the future of their flats according to their needs.

6 CONCLUSION

To make possible for the user of the flats to get involved on planning process for the residents according to family planning (for later changes).

To enable a high quality of life even at low incomes with affordable housing.

To achieve flexible floor plans, so that later modifications in function can be done very easily and with a low budget, according to the changes in life situations.

The more flexible the floor plans for the later modifications, the less relocation and housing demands, the more environmentally friendly the buildings would be (also in issue of technology).

Easy adaptable floor plans are needed, depending on later changes on our life. To be also acceptable for developers on a voluntary basis.

Flexibility is the answer to the challenges we face. The more adaptive the flats are, the fewer required structure changes would be necessary, and accordingly the number of appartment seekers would decrease.

We live in a digital society, this could be used in a smart way to achieve this kind of goal.

Plan for basic long term needs of the people.

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