

How to develop “the million program”

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Background

Sweden was at a time of severe housing shortage, in some cities, it could have taken 10 years to get an apartment. The housing that was available was often very low standard and cramped living was common. It was true that we built housing, but it went way too slowly. The Swedish parliament outlined to the various parties a crucial decision, within 10 years we will have built a million new homes. One of the key elements when this massive project was begun was that the areas would be situated in idyllic, peaceful and natural areas. It also tried to build out cars, cars and pedestrian traffic was not to be mixed. Often they built a loop around the entire area which the cars could use, so called traffic separation, in this area it was only permitted to walk.

Even in order to be able to achieve this enormous mass production of housing required finding a new way of building that was vastly more productive than historically had been built. They needed in other words to modernize and industrialize the buildings. The new type of housing was assembled on site by a giant crane. More often than not, manufactured concrete elements were made in the same place where the housing would be built in a portable “concrete plant” The houses were constructed like the assembly line, preferably in long symmetrical lines, which was to become the most productive. To increase productivity even more, houses were built on flat ground, they took down all the trees that existed, and placed the giant crane that was used to lift concrete panels in place on a rail, so that it could be quickly move to the next body of a building when the fist was complete. Then they used the same shape and appearance, all the concrete houses came to be repeat copies of each other, what could be distinguished was that which ranged from high-rise, low-rise and tower blocks, but the areas were for the most part monotone with grey rough surfaces, it caused the areas to be stiff and grey appearance.

The starting point was April 7, 1965 and construction would then continue until 1974. Totally 1,006,000 homes built, of which about half were multi-family dwellings. Of these 500,000

apartments about 250,000 were placed in houses higher than six storeys'.

Today

Of all the homes today, about 25% were built in the record years of 1965-1975. Even recently, they had to demolish a number of the buildings that were built during the million program as demand declined, particularly in our smaller towns where the younger generation moved to the cities that offered better jobs or university. But even in our major cities we have been forced to re-think, the original idea was that the areas would be well outside the cities where nature was perhaps not such a good view. Because the jobs were in the towns, the result was that those who had jobs moved into towns as soon as they got the chance. Today in the suburbs we see much higher unemployment, more benefit claimers, and more criminals than compared with more central parts of the city.

How can we develop these areas?

We can notice that there are some problems with these million areas, both in the building's technical and social character. However, there is no alternative in Sweden to tearing down these houses again. The houses stand there and serve as homes for thousands of people. Even the layout of the apartments is not so bad, in fact often quite practical.

Although the basics of the Million areas are good with pedestrian courtyards and countryside modules, there are things that could be improved. I will hereafter suggest how to develop the million areas so that they are more energy efficient, and also how to make these areas more attractive. The measures are primarily aimed at multi-residential buildings constructed during this time.

Energy

Cold bridges

The major energy thief in housing is known as cold bridges. The concrete elements forming the shell of the house are usually pretty well insulated, the problem is in the joints between the various concrete elements, this is often very poorly insulated, which creates an extreme thermal bridge where the heat from

the inside just backs right out. The result is that the apartments feel cold and have excessively high heating costs.

Events:

It is relatively difficult to overcome this problem without major surgery, even if you could fill up the space in the concrete joints between concrete panels with insulation, the thermal bridge remains.

However, you can convert thermal bridges where the house's heat is lost into something positive, namely transforming the thermal bridges into a heating bridge! One additionally insulate the façade that makes use of "double-shell system" which means that you put a new façade over the original, but including an air space between. Should you take the project to its limits, you could have solar systems on the roof, the heat generated is then circulated around the body of the house in the air gap, you have inside the new façade. You can also apply this "double-shell system" on a single wall only, for example where most of the walls to the north where the sun does not reach to heat them.

Roof

During the construction of the housing projects, it was common practice to build multi-family houses with relatively flat roofs, usually only a few degrees of tilt. Because a large part of the house's heat loss occurs through the roof, this is an obvious point for improvement.

Events:

If the roof design works satisfactorily and is not facing any major renovations in the near future, the easiest and cheapest way to get the house climate is to fill up the space with thicker insulation. Absolutely the most effective way to add insulation to an existing roof is to inject loose wool, timber frame breaks down then spread evenly in roof beams even in those facilities that are not easily accessible to isolate.

Ventilation system

Multi-family dwellings were often built with mechanical exhaust, utilizing a fan that constantly operates, whose job it is to suck the air out of the house so that a vacuum is created. The supply air is obtained by air-valves often just under the window. This ventilation method is not entirely optimal from an energy point of view, where the warm heated air is sucked out of the apartment and placed directly into the atmosphere without trying

to take advantage of the heat. Air supplied into the apartment, is not preheated, but has the same temperature as outdoors.

Events:

In order to better take advantage of the heated air that has been inside the apartment, it is a good idea to install a supply and exhaust system. The supply system and an exhaust system to recover heat from indoor air, which passes through a heat exchanger on the way out. The heat is then used to heat the air that is moving into the apartment, which passes the heat exchanger.

Socio-economic

In order to improve the million program requires not only energy efficiency measures, but in many cases, we must begin with social rehabilitation. You have to give people who currently live in these areas a future, spending money on schools, apprenticeships, internships and the like. Local authorities must demonstrate that it cares.

One example where you have a social regeneration is Gårdsten outside Gothenburg. The last 10 years the area has undergone a large renovation program, where it has invested an enormous amount of money in the renovation of the high rise buildings to energy-efficient houses powered by solar energy. Once renovated, the houses, public spaces and environments around provide security. Creating new jobs for those who live there increased bus trips into the city center to make it become part of the city of Gothenburg. Renovate the schools, kinder gardens, and homes for the elderly. Build them in detached houses in the midst of the high rises to create variation and so on.

From a purely financial issue the real estate project is reprehensible, they create a more attractive area and better net operating profit, which raise the value of the houses, but not close enough that it would provide a positive financial result. However, the socio-economic impact was far greater than they ever expected. It has been through the rehabilitation program created in the future. Many more people today have jobs, which mean that benefit claims have declined. The crime rate has more than halved, with the result that security and job satisfaction has increased. It has been a result that Gårdsten residents are proud of and care about.

Relationship Management[®]

Stena property uses something they call relation management. This is a summary on the use of young people and unemployed for some simple projects to create involvement and getting people into employment. The purpose of their effort is to use a greater involvement from the tenants, creating better conditions for the local government to work more effectively and thereby increase profitability. At the same time building improved job satisfaction in the area and create security.

For example, these three different orientations of social projects:

Youth activities; where there is a graffiti team, a cleaning team, summer jobs. Graffiti group include a collaboration with the youth center, where those who work actively removing graffiti are rewarded with a skiing trip.

Tenant mobilization; trying to create commitment to the home environment. It has stair hosts and safety tours. The stairwell hosts role is to act as the extended arm between Stena and tenants. It comes with suggestions about how different things can be improved, informing other tenants of the projects which are underway, especially requests from tenants to the staff at Stena.

Area actor; Cooperation and coordination with various agencies and municipalities.

Local Government

Employment

In order for us to develop the million areas we need to create jobs for the people who live there, in order to reduce benefit claims, crime and so on. These are responsibilities that local authorities get to grips with quite quickly.

Real estate companies can help create jobs, to some extent. Look under heading; Relationship management.

Schools

Equally important, if not more important is that there are good schools in these areas. It does not distinguish between going to school in an affluent area versus a million area, but there must

be the same conditions. This is where our future lies, it needs to be taken care of.

The property owners can establish cooperation with the regions young people in their leisure time, there is a lot here to benefit from, both property owners and young people's point of view. Look under the heading; Relationship management.

City planning

The idea when they built these new modern areas was that it would be close to the countryside and the introduction of traffic separation, with no cars in the area, only a larger ring road would go around the area, cars were parked in huge parking lots, where you would walk home to the apartments. Looking back, maybe this was not such a good idea. Traffic separation created a situation that you never really have any direct reason to enter into these areas unless you live there.

Each area was like a little island surrounded by highways. You cannot get to the island, it will be to leave the highway to the island, around or passing by. This causes these islands to be very isolated, with no people directly "in the neighborhood"

The most common, oldest and most attractive type of urban development consisted of square network. These towns invite more to life and commerce, as people who live there still have roads through the area. It is in the area and walk, go shopping in the stores, eat at restaurants and so on. This makes these areas so much more alive.

Maybe this could bring the million programs isolated islands to life by admitting traffic in, and with more traffic and new people? Let us say you took away all the large parking lots and garages and created a large square network across the area for all the new roads, instead of large parking areas far from home.

The buses that currently travel around the area, should instead seek to integrate so that they go through it instead, to provide security where people live. A valid part is to create an identity for the area that people associate with something positive and want to be part of.

Property owners

As it stands today in many of the Swedish million project areas, there are one maybe two giant housing companies that own the

entire area and on many occasions apartments in the several thousands. Many times, it is the municipality that owns the property, without the requirement for profit maximization. Perhaps this is not the best solution to create a living area? If you look inside the central parts of the cities, we often see many small property owners with one or two houses each. This creates a greater mix with different tastes, flavors, financial control and houses developed in different ways. Maybe they should carve up and sell off many smaller parts from the municipal housing stock, to get more variety?

It is also important that there are different types of housing, mix rental apartments with home ownership flats. In the middle of today's major islands that were created were often thought to save nature, perhaps it would be here instead condense by building villas, townhouses for present residents of the area with a little better and other needs. In time perhaps you could attract back those who once fled from here, perhaps due to the input insecurity or that did not find the accommodation that they wanted.