

Sustainable Suburbs: Learning From Europe
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First Slide

This year I worked with some people who were some of the most open minded people who cared deeply for the environment and future of Calgary.

When I asked where these people lived, they usually said somewhere in the sprawled out suburbs...

Second Slide

This initially didn't make sense to me, how could people so knowledgeable about environmental issues and the problems of urban sprawl contradict themselves?

But then I realized... what is the other possibility? My co-workers had families. And living in high rise apartment's downtown wasn't a viable option for them and they couldn't afford a house in a place like Mount royal. The only place for most families raise a family in Calgary was somewhere out in the sprawled suburbs. Come to think of it, I had never really seen a successful family setting that wasn't in a car dependent neighborhood... That was until this summer.

Third Slide

I was a summer student this year with the Land Use Bylaw Sustainment Team. But I also had the privilege of going to Europe on the very first U of C Urban Studies field study on sustainability. We visited France, Germany, Czech Republic, took a day trip to Austria, Denmark and Sweden.

In Paris I went to the top of the Eiffel tower, in Munich I drank at the beer halls and saw many other amazing sites, I saw the planning that made Europe what it was, Mixed use, human scale buildings, amazing architecture... this was the planning that Europe was famous for, this was the Europe that had been around for hundreds of years.

This isn't what amazed me the most. What amazed me most was barely a decade old.

Fourth Slide

This is a part of the suburb of Vauban, in Freiburg Germany. The development was built on an old French army base

On the roofs aren't shiny shingles, these are all photo voltaic solar panels. These houses produce more energy than they actually need, so they actually put back on the grid, there plus energy housing. This is what makes Vauban famous...most houses are not plus energy, but all the houses use a very high percentage of renewable energy.

This was the most family friendly neighborhood I had ever seen, 76% of residents had children. Children were playing games in the streets and parents did not have to worry, the cars residents owned were in a parkade outside the development, cars were allowed to drop people off but they could only go at 5km an hour. When the community first opened in 2001 there was car ownership of 56% a few years later in 2007 the number had dropped to 20%, due to how easy public transportation was in Vauban and the close proximity of work and other wants and needs.

There was usually a park in view of every house. And it dawned on me what was safer being able to watch your child play from your window, rather than having you child cross roadways to get to a park in the suburbs.

We met with the head planner of Freiberg and he stated that in a safe community you should be able to call your child in for dinner from the front porch. And you could still have these parks and green space with having high density.

Fifth Slide

20% of residents own cars, $\frac{3}{4}$ of working residents cycled or walked to work, ... this was in 2001 before there was rail transport in the area, a more recent study some of the cyclists now took rail transport, but cycling remained the main form of transportation.

The community of Vauban demonstrates that family suburbs, can be transit and pedestrian orientated, have mixed use and have high densities. Vauban shows that this is a better environment for children and families than a traditional sprawled suburb.

But for a specific example on applying elements of Vauban to Calgary I want to go back to what their famous for: Solar power

Solar technology is rapidly improving it seems almost daily, seeing that Vauban already has houses that produce more energy than they consume, even with older technology.

this gives me hope for the future. What gives me more hope is that Calgary has more sunlight than Freiberg.

Calgary: 2405 hours of sunshine a year, 4th sunniest city in Canada. Calgary has the most sunny days anywhere in Canada.

Solar should be in Calgary's future, but I know Calgary is waiting for new more cost effective solar technology... but there are housing types that can better equip solar panels and make more effective use of solar panels. These houses are called "solar ready housing" and are not much more expensive to build than traditional housing. If you incorporate solar ready housing into new suburbs, and the new solar technology arrives, you don't have to retrofit a bunch of houses. You have a simple installation.

And although solar technology does change there are many constants like south facing roofs that will be beneficial no matter how many new and strange technological improvements exist.

Sixth Slide

Now for some audience participation, Who can tell me why they would put grass on the rail lines?

Sound, when the train runs over the grass it is much quieter than a surface like pavement, because it is residential it is desirable to do so.

Seventh Slide

This development was built on agricultural land for the world expo 2000 and Hanover's housing crisis

This is a small passive house; Building costs are as low as conventional buildings, but energy conservation of 75% greater than conventional buildings. Greater Insulation, Air tightness, south facing windows and green roofs is all it takes. Passive houses are no more expensive than traditional houses. Because the houses use such little energy to operate, solar and wind can power them effectively. And again, the construction cost around the same amount of a traditional house. Kronsberg had 60% less carbon emissions than compared to conventional new construction in Germany

108 people per acre or 44 dwelling units per acre- when I talked to my friends about if they would want to live in a high density neighborhood, they said they wouldn't want to live in a slum or "the projects". Walking through this neighborhood slum is the last word that you would think of. I think a lot of people get turned off by North American high density developments because of the poor job that people have done in the past. But

seeing communities like these would surely make people change their minds about density.

30 to 40 minutes by car from the central city and 20 minutes by rail- these communities can be built farther away and still be successful, but they need to have good public transportation

10% of homes are built to Muslim beliefs and customs... This was part of the "habitat" housing project which promoted multicultural coexistence. Now I had just come from Paris where there was high racial tension in a lot of the suburbs, everyone knows about the riots. In Kronsberg there was a lower crime rate than other Hanover suburbs, and had one of the lowest crime rates in the city despite having low income and immigrant populations.

3000 local jobs for residents... 700 jobs in the high tech industry are going to be added onto this. I say jobs but these were careers, a economically sustainable community cannot have a few Starbucks and expect this to satisfy the job needs of the local residents.

Eighth Slide

Planning competitions made some of the best developments in Europe.

Kronsberg had two major public competitions, a master plan drawn up for district and plans set in place for the design of the housing.

Kronsberg did an environmental impact analysis that included vegetation, soil, rainwater, ect surveys. When planning the communities the residents or future residents had a active role in the construction of the community. You can take ideas from another few hundred people for no cost!

It wasn't just one developer or architect designing these neighborhoods, there was a variety of developers and architects, so there was diversity in building style. This got rid of cookie cutter housing.

In some competitions there were up to 300 submissions
Multiple architects and developers participated in the competitions and learned new affordable sustainable building techniques.

Ninth Slide

This was the inside of a Hanover apartment building.

These four story buildings have internal courtyards enclosed above with a very light-weight system of plastic panels. The layered panels enclose air chambers that seasonally adjust to allow more or less sunlight into the atrium spaces. What an amazing place to live for people with Seasonal affective disorder, or people who love the Calgary's sun but not the -40 weather

Tenth Slide

Malmö was built on old shipyard and now runs on 100% sustainable energy and has revitalized the economy of the area. This was the only sustainable development that didn't have a competition to determine its housing and site plan. Rather developers and the City worked together.

The development minimized heat loss by putting tall apartment buildings on the outside of the development so the tall buildings block salty ocean winds.

Eleventh Slide

The thing about these developments is that the city either already owned the land, or bought the land for the development. Malmö is no different.

But there wasn't a competition. This development was made possible by the City and developers working side by side and setting quality standards. The City can set quality standards on private land through documents like the Land Use Bylaw. What I saw is that when the city works closely with developers, you can do amazing developments like this.

Twelfth Slide

All of this is basic idealistic planning, but it's the policy that makes it possible

Thirteenth Slide

Now it might seem like the average European is just more environmental than the typical North American. I don't believe this to be the case...

I was standing in line at the grocery store and I realized that everyone in front of me had a reusable bag or backpack to put their groceries in. I initially thought "wow these people care about the environment", that was until I had to purchase 2 plastic bags for what was equivalent to a Canadian dollar. These people used reusable bags because it was a more cost effective choice.

People do care about environmental issues and sustainability... but first they care about their immediate wants and needs.

They took trains because it was easier, cheaper and they could have a beer with every meal. People are rational actors. I know some very environmental people who drive to work in Calgary because taking transit would take them 3 times as long. They live in the sprawled suburbs because they would have to decrease their standard of living if they were to do otherwise.

People weren't moving to these developments for the reason of decreasing their carbon footprint, they moved there because it increased the standard of living. One did not have to pay high energy costs, they had many community amenities, low crime rate, they could, but did not have to use a automobile to meet their needs, unique housing and a close place to work.

Fourteenth Slide

There is a demand for this kind of housing in Calgary, look at the success of Garrison Woods. For the same price people could have bought a larger house in the country side but chose not to. Garrison Woods is probably one of my favorite communities in Calgary, but the communities in Europe blew it out of the water.

There will be people who would rather not eat than give up their large truck and single detached house on the edge of the city. But there is a lot of people who would rather have more disposable income live closer to the city and be in a more family friendly environment.

When or if I have children, I would want to raise them in an environment like this, even if I had never known anything about planning,

Fifteenth Slide

Mayor Bronconnier stated that "suburbs will always be a popular housing choice" I agree with this. But that doesn't mean that suburbs can't be sustainable

In the past sprawled suburbs were the rational choice for housing, but in the future, sustainable suburbs will be a much better alternative for some.

Sustainable suburbs can be better for a city and the individual socially and economically if built correctly. At this critical time in Calgary we can take this expected 187% increase in new suburban population and apply the old suburban model and hope for the best, or

we can evolve this city to set a worldwide example in suburban planning, one that provides the citizens of the future a better quality of life than a sprawled out suburb.

I could not cover everything, but I am open for any questions.

Thank-you