

Culturally Responsive Built Environments
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Lecture – 10
Winter Cities: Design for ‘All’ Perspective

Welcome to the course Culturally Responsive Built Environments. Today, we are taking up a lecture on the Winter Cities, but from a Design for All Perspective. In our previous lecture, we did talk about how the winter urbanism, the aspects of landscapes keeps changing from season to season, and how a barrier becomes path, and path becomes barrier in different seasons, and how it also have both advantages and the disadvantages. Especially the disadvantage from we are talking about in terms of its mobility patterns, how it affects the mobility patterns of the elderly people or the normal people, even some of the people from different places, who are residing in those countries.

And this is actually because of the harsh winter climates. And it has, there are two things; one we talk about, it has been a disadvantage groups this is at one is the physically differently abled so groups, who have some different disabilities, walking disability or any other kind of disabilities. And the other one is also the migrant societies who are coming from different social diverse backgrounds.

Imagine in Sweden, in fact it has contributed certain percentage of its GDP to encourage the refugees and the asylums to be able to, they have given shelter for certain people. And then peoples in if you can find lot of ghettos formed in Stockholm area. And, nowadays they are taking a challenge of how they can upgrade through these kind of, upgrade their downtrodden settlements, and how they can you know occupy with these. So, provide shelter and so that they can certain activities could be promoted further.


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Regulations and Guidelines -In Swedish Context

BOVERKET - The Swedish National Board of Housing, Building and Planning
Boverket (2008) *Accessibility and usability in public spaces*, available on www.boverket.se

HANDISAM-
Handisam (2003) *Guidelines for Accessibility: Break the Barriers*, Swedish Agency for Disability Policy Coordination, available on <http://www.handisam.se/>


Do they Work
in Snow and
Ice
Conditions ?



Now, in terms of regulations and guidelines in Swedish context, one is we talk about the Boverket the which is guidelines, which is issued by the Swedish national board of housing, building and planning. And that is where we talk on accessibility and usability in public spaces. And there is also on the Handisam, which is of guidelines of accessibility break the barriers, which is actually through the Swedish agency of disability and policy coordination. When you look at all these mostly you will see a kind of similarities, what European models talk about. But, the biggest question is can they work in snow and ice conditions?

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Many outdoor environments that are usable in bare ground conditions are not necessarily usable in snow and ice covered conditions.



An old woman walking with kick sledge on the pathway as the ramp is closed during winterChildren's play areas closed during winter. Source: Balanzat (2014)



Let us for example, I show you in my previous lecture, I did briefly explained about this. And there is lot of there is not much of literature has been provided especially in the Nordic countries context on the winter urbanism aspect. And if you look at on the left hand side, yes as per the guidelines, yes they have provided ramp for the disabled people to go to the shopping place. But, 8 months of the time or 6 to 8 months of the time, it is not used by anyone, because it is completely covered with the snow.

Now, similarly with the children play areas during winter, so they do have each and every neighborhood have the children tot lots. But 6 to 8 months as the same story, children hardly go there. Except a few places, where they make a snow mounts and play, but what happened to all the infrastructure and the maintenance of it

So, this is one observation, which has actually opened a new dimension of thinking towards the winter urbanism, and that is where I had started thinking on the accessibility issues. And myself and one of my colleague of Glenn Brgard, he is a specialist in the accessibility component, and especially the footwear and some of the tools- assistive tools. So, I started working with him. And so, we started looking that accessibility issue not just a ramp or a connection, but looking at it in a much more on a cultural environment.

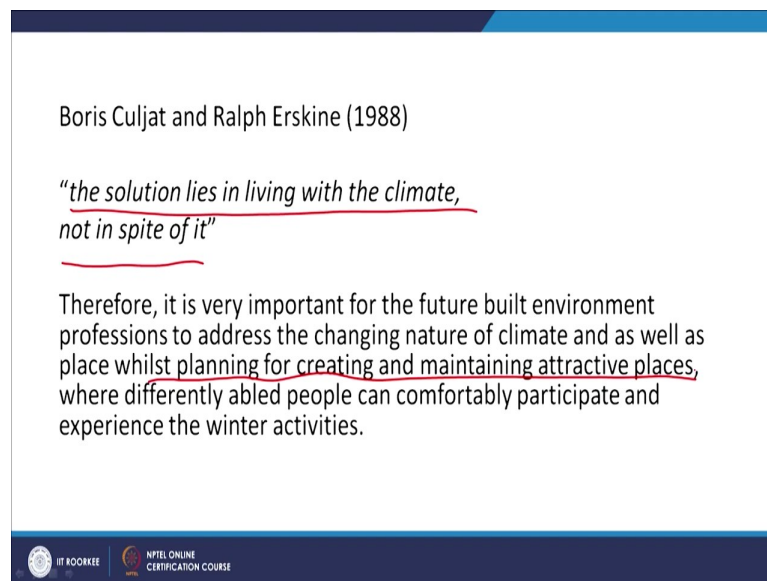
So, how winters can influence? Now, one is people often gets sick in winters, because much of the time they fell down because of slippery surfaces. Especially sometimes many of my friends whose, who are new to that climate, and they do not know how to what kind of clothes they have to wear, what kind of remedies they have to take, and how to walk, and what kind of shoes they have to wear.

In winter, normally we have some we do wear some kind of shoes with spikes. And even the winter, the car they change the car tires, with the winter spikes in it. And you know like that has different adaptable practices. So, many of the foreigners who come to visit this places may or may not be aware, and of most of the times they end up falling down, getting damaged, fractures in their bones.

And then, the second one is the psychological effects. In the psychological effects, because most of the 6 to 8 months time you do not see light, hardly morning 7 o clock I used to go to office, I hardly see sun, and evening 5:30 or 6 I am coming back from office, I hardly see any sun.

So, basically we are living in mostly in the night hardly 1 hour to 1 and half hour we get a sun a very lighter light I can say. And this in turn because being only in home, this causes depression, and so that is how you can see many of the depressive cases in the Nordic countries as well. Though it is referred as one of the second happiest country in the world. But, still there are still you can see because of the weather, natural weather conditions

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Boris Culjat and Ralph Erskine (1988)

*“the solution lies in living with the climate,
not in spite of it”*

Therefore, it is very important for the future built environment professions to address the changing nature of climate and as well as place whilst planning for creating and maintaining attractive places, where differently abled people can comfortably participate and experience the winter activities.

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And that is what the Boris Culjat and Ralph Erskine, they talked about the solution lies is living within the climate, not in spite of it. So, how we can actually live with the climate is basically and you know how we can make and create maintaining attractive places, where differently abled people can comfortably participate and experience the winter activities.

For example, if I remember in my university if I want to go to one block to another block, they also had a cellar connection. So, in winter you can just instead of going out, you can walk around. But then, peoples attitude started changing in these days. Now, they say why not open in outside, why not see the snow, why not see the light, so that attitude itself is making a courage giving some courage to participate in winter.

And the challenge here for the urban designers or the place makers is how to create these places much more accessible, not only for the normal abled people, but also differently abled people, and also different cultural groups, who are coming from different places.

Now, this is where we started looking at what approach actually suits for us in understanding this whole phenomenon.

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The need for rethinking the concept of 'Design for all' in 'all weather conditions'



INSPIRED BY A PUBLIC SCHOOL STUDENT WITH DISABILITIES
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ALL THESE OTHER KIDS ARE WAITING TO USE THE STAIRS. WHEN I GET THROUGH SHOVELING THEM OFF, THEN I WILL CLEAR THE RAMP FOR YOU.

COULD YOU PLEASE SHOVEL THE RAMP?

BUT IF YOU SHOVEL THE RAMP, WE CAN ALL GET IN!

CLEARING A PATH FOR PEOPLE WITH SPECIAL NEEDS
CLEARS THE PATH FOR EVERYONE!

The universal design approach

Inclusive design approach

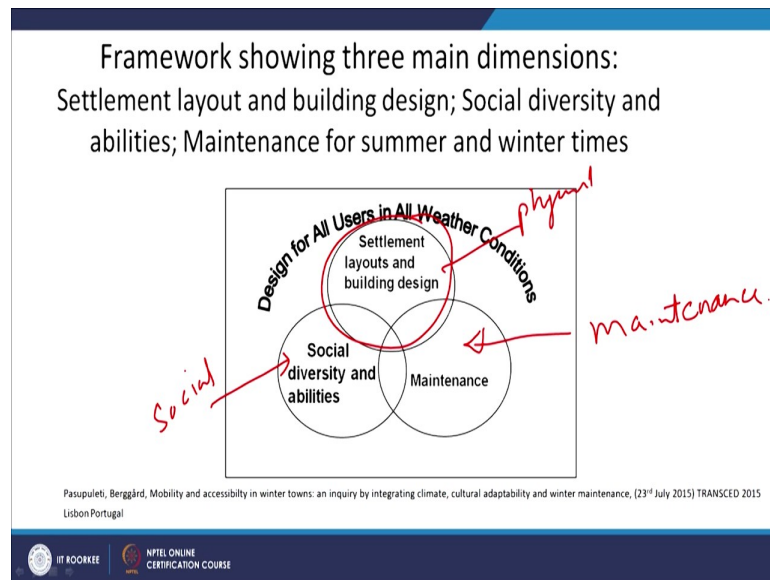
'Design for all' approach

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<http://www.tmkthink.com/archives/2919>

So, we started investigating of you know, we look at this in the cartoon, how if there is a passage, but then if I can see that if he does not shovel this snow, you know no one cannot get in right you know. So, it is all about also to do the maintenance aspect. So, we started looking at what approaches one can look into it. So, one is we will talk about the universal design approach, where a kind of one solution for almost all the issues, so you know when he can access that. But whereas the inclusive, where I would say they are tailored for each particular issue, and different solutions start emerging in a inclusive approach and different stakeholders start taking part in it. And here I am looking at a kind of design for all approach.

So, this is where design for all, because here I mean of all it is not only for the disabled or the different abled people. It is also the culturally, you know how it could be, the places could be culturally adaptable. And it can so it can empower various other stakeholders to take part into it in the design process, so that is how we will started rethinking the concept of design for all, but in all weather conditions.

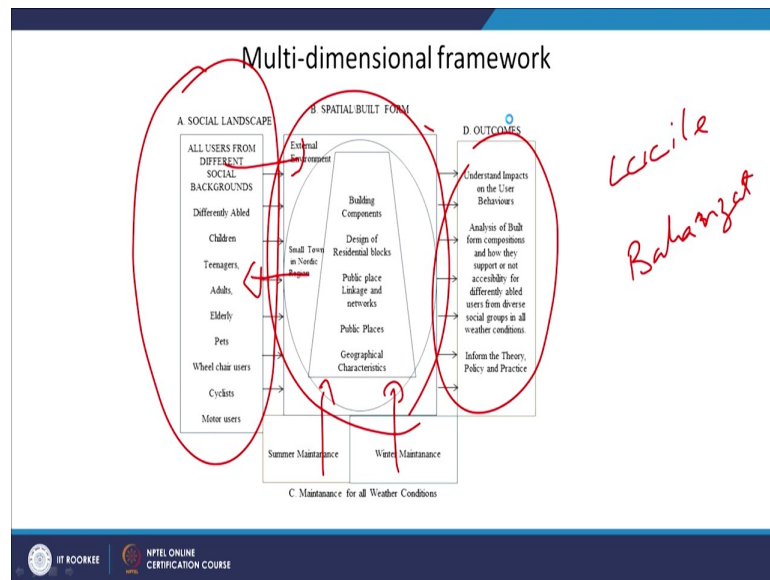
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Now, then and myself we started looking at a framework, how we can actually establish and look at this winter urbanism from kind of three dimensional umbrella side of it. So, one is we are not looking at just a building point of it, but we are also looking from the settlement layouts which is the physical dimension and the building design. Whereas, the other one which we are looking at the social dimension. Especially, where the migrant population from different nationalities come together, and they are participating in the space, how it could be accessible and how they respond to it right.

And the third important thing which we brought is the maintenance you know; so in fact the social diversities and the abilities, how they possess to access certain spaces, and how the maintenance for summer and the winter times do change. So, this is how it may be for the first time of our kind the slow work started looking at this.

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And then what we did was, we made a kind of, we taken a small town in Nordic region, it is a kind of on one side. We looked at various, and this phrase actually developed through a species one of our student master student of Lucile Balanzat, where she looked at the culturally adaptable spaces for all. And on one side, this is the built environment component. And then, on one side you have the maintenance aspect of it, how it is influencing this built from, another side how the built form is in correspondence with the social diversity, so and that is how we looked at the outcomes of it. So, this is how framework, which we started working on.

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Enabling our built environments accessible to all in all weather conditions is a holistic and scientific challenge....

The slide features a central orange rectangular box with the text "Enabling our built environments accessible to all in all weather conditions is a holistic and scientific challenge....". At the top center of the slide is a small blue circle. The bottom of the slide contains logos for IIT ROORKEE and NPTEL ONLINE CERTIFICATION COURSE.

Now, the biggest challenge is now how to enable this built environment our built environment is accessible to all in all weather conditions. So, it might be accessible in summer, but may not be in winter. And this is the challenge.

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With regard to accessibility in winter conditions, the question comes here is whether it is just a maintenance aspect or it has to think about the overall design aspects comprising from site planning considerations and urban level planning processes to the building design.

Photo: Lucile BALANZAT (2014)





Photo: Ram PASUPULETI (2014)




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Like for instance, I will start giving you some certain examples, where now you look at both the cases. Now, I have shown you a cases, where it has hindered the access, but in the same winter, you can see how this still ramp is in the sports complex. So, it is still away for the people to access right. So, this is informing. And these are the some of the observation we started looking at. And we started understanding that how come these are not filled with snow, how only those buildings friends are filled with snow, and it is not it is not accessible, and how these are accessible in the same time. So, this is how.

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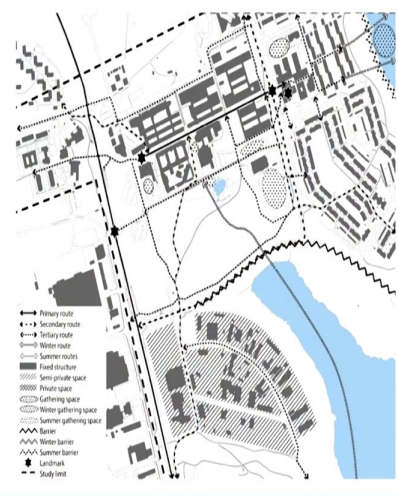
Methods

- *Sociological and behavioral outcome:* Understand and analyze the potential risks and impacts on the social behaviors of inhabitants.
- *Spatial outcome:* Analyze the Built form compositions and how they support or not the concept of accessibility for all users in all weather conditions.
- *Applied outcome:* Inform the theory, policy and practice for the better enablement of accessible built environments for all users in all weather conditions. ◦



And then, we looked at a kind of one is the sociological and behavioral outcome: so what kind of potential risks, and what kind of impacts on the social behaviors of the inhabitants. And the spatial outcome, we will talk about analyze the built form compositions, and how they support or not support for all users. Similarly, on applied outcome, so how we can inform this things, so which is actually published in various papers.


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Winter Notation
Mapping of
Porsön Lulea
Sweden

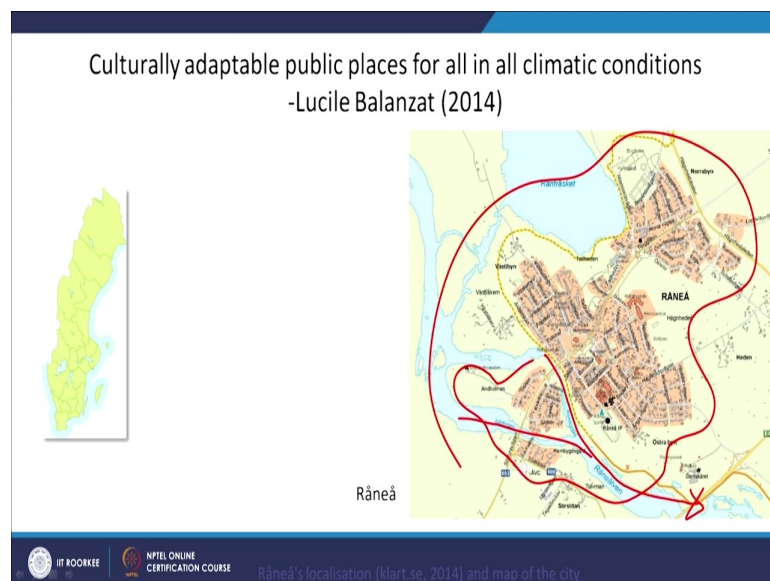
Credit:
Emil Iversen

Lecturers: David
Chapman and
Ram Pasupuleti



So, as I have explained you in the lecture in the previous lecture, we did a kind of small exercise within our studio network, where we studied the portion route. And one of our student have actually drawn a very interesting work, how with the help of David Chapman, we developed a kind of notation guidance, how we can denote the winter spaces. So, with that we give the students and they started working on different areas of the city, and they started establishing, what are the various routes, how they change in time, and how what kinds of activities do take place.

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Now, coming to the Lucile's work, which is talking culturally adaptable public places for all in all climatic conditions; here this is the small village, where I also used to live. This is Ranea, and you can see the Ranea river which is actually passing by. And here, so very small village, but then, much of the, if you look at the inhabitants compared Lulea, which is the district headquarter sort of thing, and in the small town.

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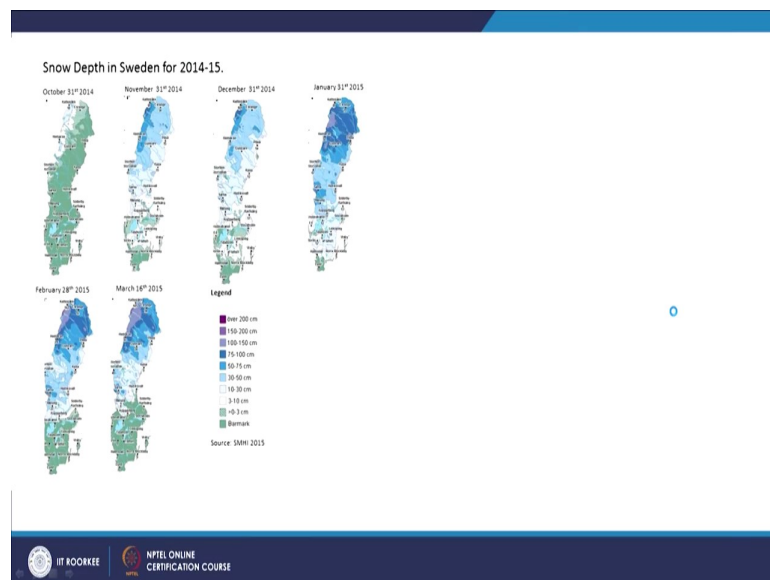
Statistical information showing the population census 2013

	Inhabitants in total	Foreign Citizens	Born abroad	>65 years of age
Luleå	75 383	3 424 (4,5%)	6 933 (9,2%)	14 436 (19,2%)
Råneå	2 076	129 (6,2%)	207 (9,9%)	599 (28,9%)

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The total is about 2000 inhabitants on which in which 129. And we have this is a brief statistics of according to the 2013.

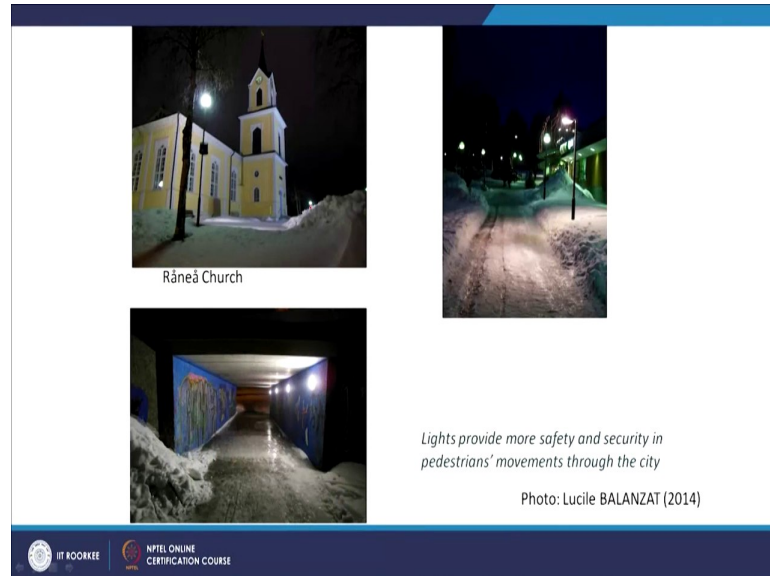
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And how about the snow depth; if you look at the snow depth in from the series of years by various months how it is changing, so we get all the information from the government department the metrological departments, and all other websites related governmental websites. So, so we will see the statistics of; what is the kind of snow cover, and how it is changing from a month to month, and even you also get the statistics from years to year.

and the ice hockey field you know. So, all these things she mapped about all the aspects of it.

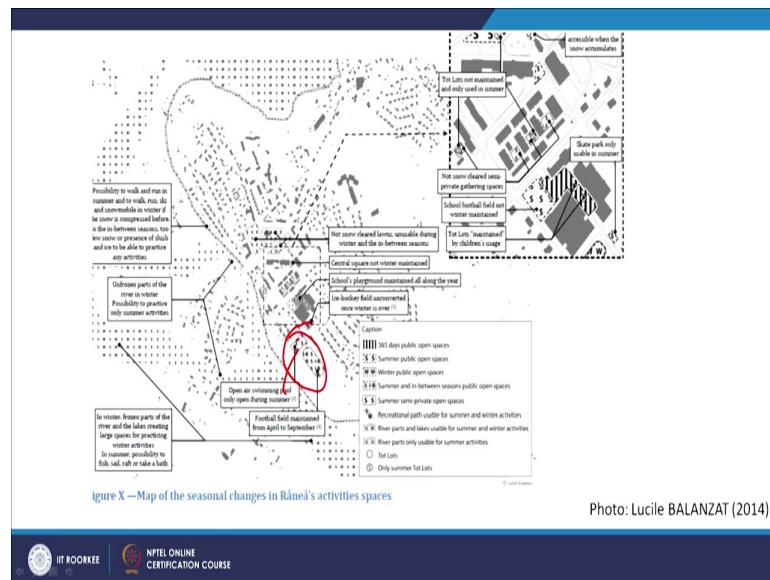
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And for instance, I will give a brief about and this is a Ranea church, and the passage, which is clear. But, you can see the slippery, it is very slippery in the winter condition, and it will be very dark. In fact, some of the tunnels passing under by most of the times they are very slippery, because this is not properly maintained you know. So, it is difficult for anyone to even walk down at sometimes and even the light.

So in fact lighting is one important aspect which the Nordic countries focus on, because to make their places more attractive. So, they otherwise with the darkness, they might met with some accidents or they also get some kind of depression. So, most of the time, they focus more on the lighting aspects. So, it provide certain safety and security.

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And how the seasonal changes you know. So, in fact during the summer time, they open these swimming pools, which is the children swimming pool on the outdoor swimming pool; whereas the winter time they have within the city right. So, basically they have both winter swimming pool, and summer swimming pool. And people try to go for prefer to go on the outdoor swimming pool during the summers, where they would like to see sky, play with children together, and lie on the lawn things like that.

And she mapped out with some kind of a notations like you know, the 365 days open spaces, and the summer public open spaces, and the winter public open spaces. And there is also one more thing called in between seasons, the summer and winter. There are certain places, where because of in the transition time, how certain spaces act as a kind of interactive zones.

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Mobility patterns

Public places:	Summer use	Winter use	In-between seasons use	Night use
Principal roads				
Residential streets				
Pedestrian and bicyclist paths				
Shortcuts				
Sidewalk				
Supermarket's ramp				
Recreational path				
Parkings				

Source: Lucile BALANZAT (2014)

And so, what he did was, she looked at the street networks and various hierarchies, so these are the some of the built components. And then summer use, winter use, and in-between seasons use, and also the night use. So, how a space is used in the night times right, and how people feel safe about it, and that is how she have done a survey of it.

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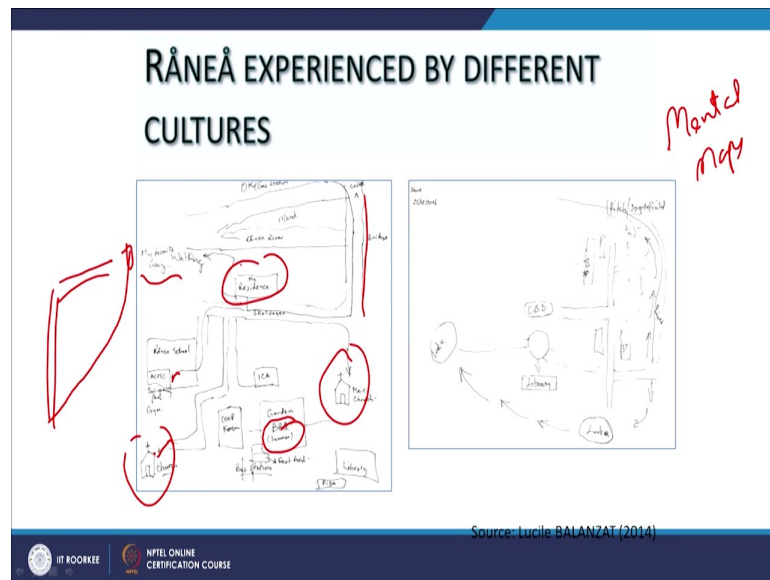
Seasonal and night uses of the public spaces of Råneå

Public places:	Summer use	Winter use	In-between seasons use	Night use
School's playground				
Lawns				
Central square				
Covered benches				
Semi-private areas				
School's football field				
Skate park				
Open-air pool				
Ice hockey rink				
River and lakes				
Recreational path				
Football field				

Source: Lucile BALANZAT (2014)

And similarly, she was used all different ice hockey rink, rivers, lakes, football (Refer Time: 17:56) whole settlement. From a settlement layout pattern onwards, she identified different pockets of it, and started understanding that.

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And then also these are some of the mind mental maps like she has started taking from various refugees and the local people, how they have perceived this space, what is the most important movement patterns, how they get it you know. So, now you can see here, people started talking about the shortcuts you know like in fact, you have a road now what they do is instead of going like this, they walk in the snow like this during the winter. So, it is a kind of shortcut. So, you know they will talk about their favorite ways of going, and so in that way the passage patterns how they would like to see, how the connectivity patterns has to be established and maintained.

So, this mind maps have provided of what is important to them. For instance, they have talked about main church, how they go around, because Skolvagen and the Arctic swimming pool. So, basically they are talking about these and the church, which they normally go for it. So, basically this movement patterns during the winter and the summer times have actually provided them that you know; what is their understanding of that place how the place is legible for them in both seasons.

Now, you can see here, he talks about Barbecue summer. So, in the summer time, what they are doing is it is the putting a Barbecue, and they are so indicating from the residence, how they are travelling around, so that has given some information of how people move around.

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	Potentials	Weaknesses	Recommendations
General appreciations of the winter	Sun, snow, cold Serenity	Snow, cold, dark Depressing and tiring	Educations about ways of enjoying winter. Develop a more attractive city with a more stimulating urban landscape.
Winter mobility	Kicks sledges and winter ways of transportation	Risks of slipping or falling down	Education about how to move through a winter city. Develop better surfaces maintenance of pedestrian paths.
Winter activities	Lot of winter activities	Identity of the gathering space hidden No places to practice the summer activities in winter	Educations and initiations to the possible winter activities. Maintenance of some "summer" places as the football field.
Social interactions	Mutual help	No public places to meet Few contact with Swedish	Create also winter gathering spaces inclusively accessible to amplify the cultural exchanges

Source: Lucile BALANZAT (2014)

So, in that note collecting all this information of samples, what you still have started working is on kind of general appreciations of winter on both the potentials, and the weakness, and the recommendations part of it. So, in fact when we talk about appreciation of winter, yes it is in terms of it is the winter sun, the snow. And at the same time, the following recommendation that she talks about how it is depressing, and how it is tiring, working in winter, and walking in winter, you know. So, this where she talks about how we can educate for winter.

And similarly, what kind of equipments we used for the winter mobility like kicks sledges. And what are the weaknesses risks of slipping or falling. So again, how we can talk about the surface maintenance. And similarly, we talk about the like that she talked about the activities, social interactions, and mutual help. So, mutual help is one of the important aspect, because especially with the refugee migrants from different nations, they always try to have some kind of mutual support systems, if something happens to someone at least 2, 3 for the people of the same region, they could able to help them, and also the local people they also could able to offer some support to them, and guide them how to go further, you know despite of language, and also language barriers and different conditions of these culturally different people, you know how they are coming from, some of them are coming from Afghanistan, some of them are coming from Ethiopia, some of them are coming from Cuba. So, how all these nationalities can come together,

and how they develop a common vocabulary in understanding and managing a winter space.

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Now, some of challenges; so when we started looking at the winter spaces is you have the city centre, the bus park the bus stand is clear, but then the passage to the bus stand is not cleared in the morning, so that is where we started looking at:

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MAINTENANCE ISSUES

Several technical divisions take care of different maintenance actions that are non-exhaustively listed below:

- Clear the snow in all kind of streets, roads or path ✓
- Dispose gravels or sand as an anti-slip treatment ✓
- Make accessible and usable various street furniture as benches or tot lots ✓
- Remove the snow piling
- Remove all the gravels at the end of the winter
- Remove once a year the tick ice of all the roads (public and private)

Source: Lucile BALANZAT (2014)

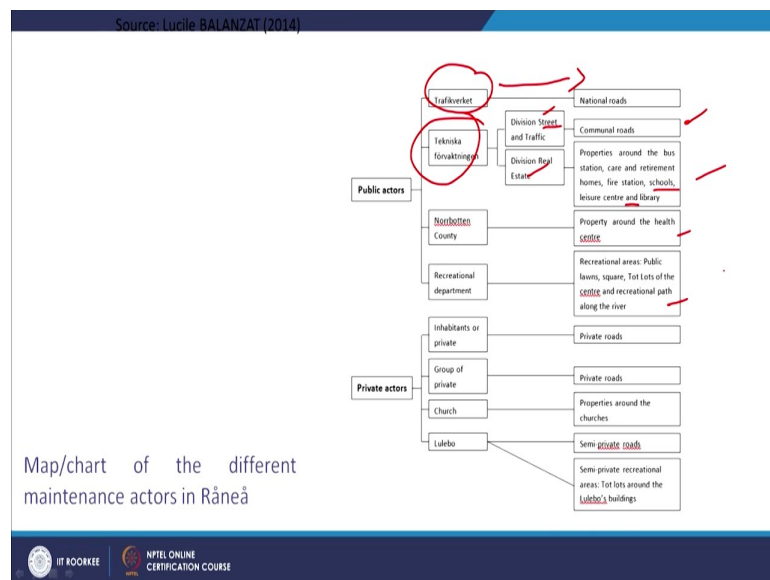
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How the maintenance issues the maintenance dimension, how it can look into the winter city component. So, now it has number one, these are the following different actions

they follow, what are the protocols they follow. But, you can see here that they are all marked in different this is a kind of state highways, which are marked in red, whereas a bostadsgator. So, this is all near these houses are all in the dwelling the neighborhood. So, like that each like you can see these of the pathways you know.

So, in that way, they are all segregated from the state level network to the neighborhood network to the pathways. So, what they do is; they have developed different timings, they have developed different timings for it. Like now, who take the responsibility? Within this maintenance things like within that they have segregated into different aspects.

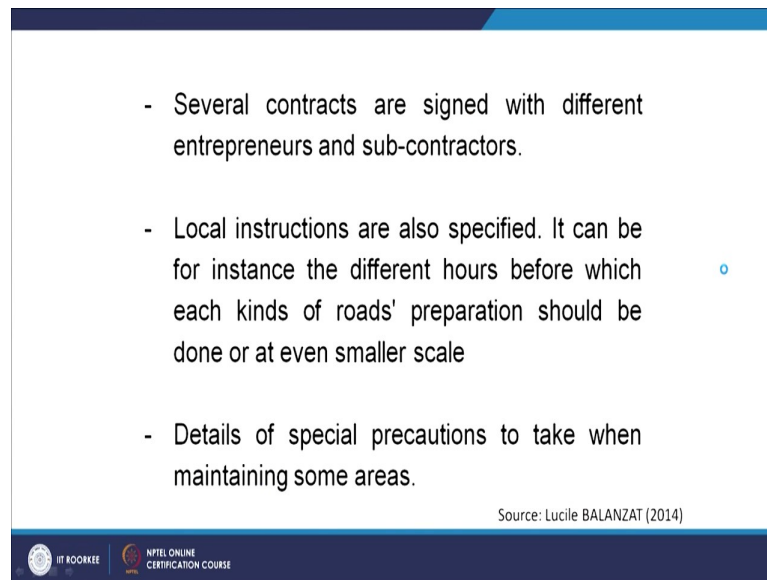
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Now, in the whole we what we did was we started mapping down of both the stakeholders of you know both the public and private aspects. Now, here we are talking about the trafikverket, which talks about the national roads, because in the national highways they are all taking care of the national roads, and whereas the tekniska forvaltningen, which talks about the division street and traffic, and within that they have a real estate.

So, here you can see the communal roads are taken by this department. And whereas, the properties around the bus station, care, and retirement homes, schools this is different. And again the county, property around the health centre, recreational department tot lots. So, like that there are different actors of it.

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- Several contracts are signed with different entrepreneurs and sub-contractors.
- Local instructions are also specified. It can be for instance the different hours before which each kinds of roads' preparation should be done or at even smaller scale
- Details of special precautions to take when maintaining some areas.

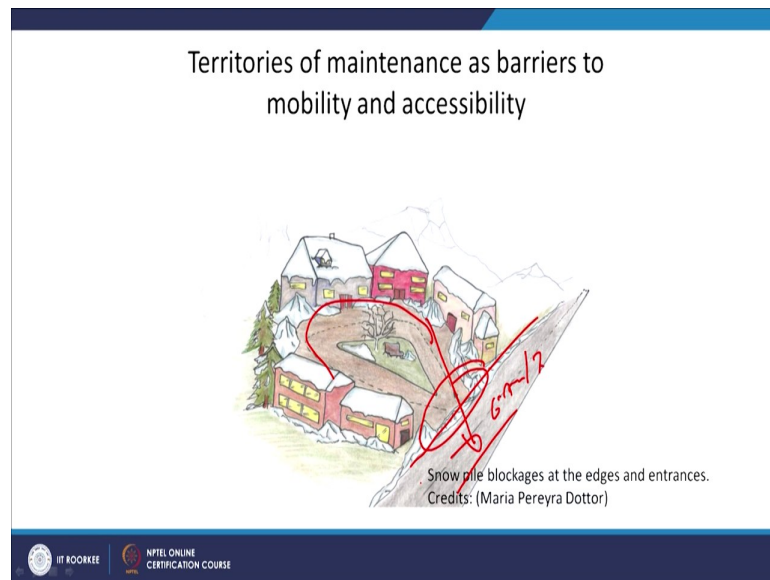
Source: Lucile BALANZAT (2014)

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And now, what happens is in the maintenance that hierarchal process of various from national level to the local level actors. So, different contracts have been signed with different entrepreneurs and different subcontractors. And the local instructions are also specified, for instance what our like from morning 6 on before morning 6, they have to clear certain highway route or the county routes, but then after 9 may be the neighborhood will be cleared out. And also details of special precautions also have given some guidance to do in a smallest in to take when maintaining small areas for example, like school.

Now, here, that different hours before which each kinds of roads preparation should be done or at even small scale: I will show you an example. And this is what is happening is with all these vertical processes, there is no coordination between these vertical hierarchies. On one side, the maintenance aspect of national level roads and communal level roads all to the neighborhood level roads, they are not much of coordination and coming, because each of them are different they just cleaner.

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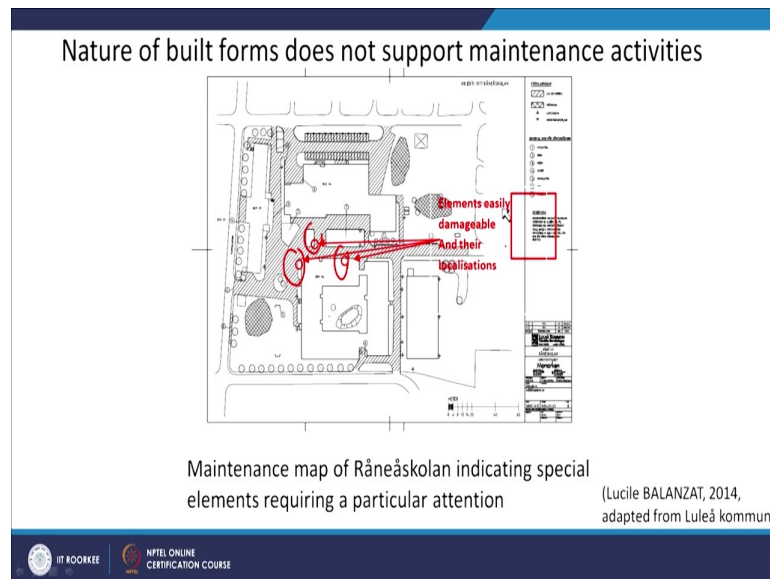
So, what happens like for instance you can see here the territories, here this road is cleared by 6 o'clock or 7, but they keep the barrier here. So, the people who are living here, they cannot pass through, so that is the main disadvantage. So, despite of having clearance, this is done by a different contractor, and this is by a different contractor. And the city level, the near the bus stop areas by done by a different contractor, so they obviously, have the barriers. Only at 9 o'clock, he will come and delete this particular take away the snow.

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So, those are the in fact problems, which we find.

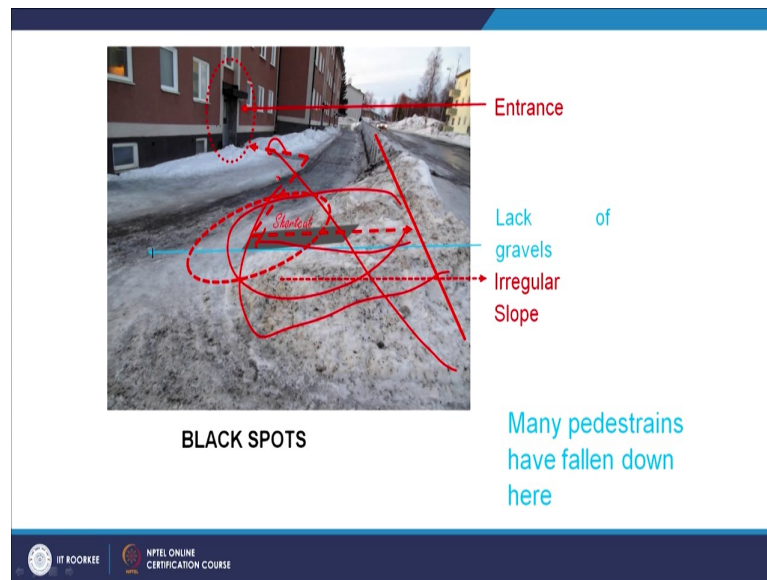
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And then for example, in the school: now they know first what they have to take and they also identified these are the elements, which are most damageable right easily damageable. So, they will always talk about a protocols, how you should take the snow first what part of the building you have to take the snow first, and then the second, and then the third, and how you have to roam around.

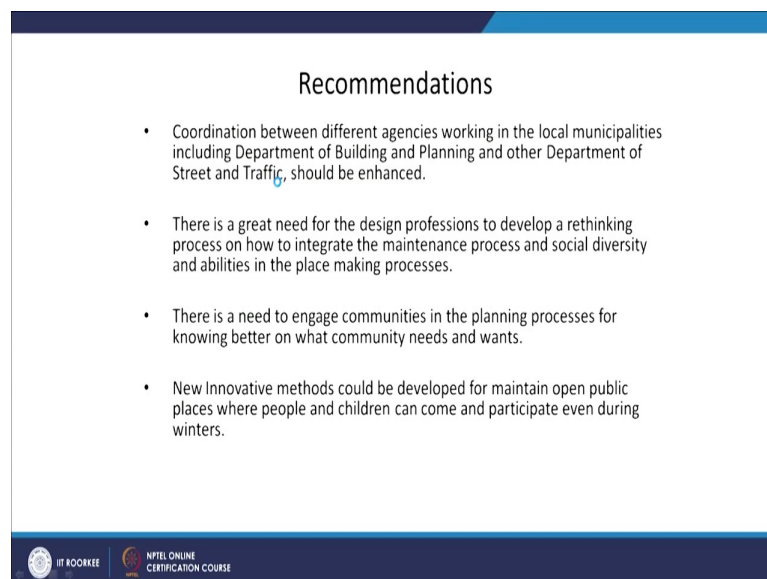
But, you see here when they built the building, have they thought about this maintenance processes or have they after building the building, now the maintenance processes, the guidance is embedding within it, so that is where position to new to start rethinking about the winter urbanism is needed. Because, it is when we are designing a building level also and its premises, we have to talk about how we can integrate the maintenance aspect also.

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Like for some of the kind of black spots like you can see the gradient of little slope, and many of the people who have fallen. So, what we did was through our interviews we identified certain black spots in the city, where they have frequently fallen down. And we will try to analyze, what are the reasons behind it through the slope analysis, and irregular slopes. And you know because normally people when you have this people try to crossover in this direction rather than this direction, so in that way the some of the black spots have been created.

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So, what we recommended in the end is a kind of we need a clear coordination between the local municipalities and the department of building and planning, and other department of street and traffic that has to be further enhanced. And there is a great need for the design professions to rethink, and how to integrate maintain process on social diversity.

Especially, with the difficulties coming from cultural not only the differently abled, but also from culturally different backgrounds, and how to engage them in the place making process. And that is what we see we could know how we will know better how a community needs and wants. So, we need to develop more innovative methods, and how the children can come, people and children can come participate even during winters. So that is how we look forward to deliberating for attractive winter cities.

Thank you very much.