



Less than 1000 meters from the train station in the Ytterby station community.
Photo: Per Kristersson, GR

NEWSLETTER 4 | DECEMBER 2017

Build dense, green and accessible but not necessarily high

The 4th International workshop of the SMART-MR project was held in Gothenburg/Kungälv 12th and 13th of December. The workshop, organized by The Göteborg Region Association of Local Authorities and Kungälv Municipality, discussed what recommendations and guidelines for developing Station Communities is needed for creating sustainability. International predictions show that urbanisation in Europe is high and increasing. This could potentially result in increased congestion and greenhouse gas emissions.

In December 2017 experts from The Göteborg Region Association of Local Authorities (GR) and Kungälv Municipality met with seven European Metropolitan regions in Kungälv to find solutions for the challenges



Pia Tynys, Helsinki, presenting results from the Walk&Talk. Photo: Per Kristersson

increasing urbanisation brings. More than 70 experts participated in total.

The theme for the workshop was development of and around transports nodes (T.O.D.). Development in Station Communities are often referred to as Transit Oriented Development. The aim is to increase regional accessibility while not missing out on local qualities. Densification was shown as a method for increasing the population and thereby giving a reason for further development. At the same time development should not diminish the need for green qualities and buildings in a human scale

To support the discussions, a study commissioned by GR and Kungälv Municipality was presented by Tobias Nordström, SpaceScape, "Sustainable Density in Station Communities".

- It's not necessary to create a high population density by building high rise blocks of flats. It is more important to find a balance between housing, services, green areas and accessibility to the railway station, to have provisions for attractive Regional Public Transport and local job opportunities, concluded Per Kristersson, GR, project leader for the international workshop.

The different sections of the workshop will be described in more detail later in the newsletter.

SMART-MR
Interreg Europe



European Union
European Regional
Development Fund

SMART-MR (Sustainable measures for achieving resilient transportation in metropolitan regions) is an Interreg Europe project running from April 2016 until March 2021 with a total budget of approximately Euro 2,2 million.



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SMART-MR 4th Workshop



Vice Chair at the General Assembly, Kungälv Municipality, Thomas Alpner.

In the welcoming speech, Thomas gave the audience an introduction to the municipality of Kungälv. Kungälv is a very prosperous town on the west coast of Sweden with a population of around 40 000. The municipality is one of 13 municipalities forming the metropolitan region of Gothenburg.

Kungälv is also a historic town located on the former borders between Norway, Sweden and Denmark.

Its location where the Göta river divides created a point of interest both for trade and travel but also as a place to defend. Subsequently a fortress was built in the fourteenth century.

A fortress several times under siege by Swedes, Danes or Norwegians depending on who was on the inside and who was on the outside and wanted access. The fortress never surrendered.

After the Roskilde Treaty between Sweden and Denmark in 1658, Bohuslän became Swedish. 150 years later a union between Norway and Sweden was formed.

–Thomas said that “The idea was to build a west coast rail connection between Gothenburg and Oslo, but then the dissolution of the union between Norway and Sweden in 1905 interrupted the plans. At the planning stage of the new rail connection the Town of Kungälv was asked if they would like to be linked to the railway. The Assembly answered with a -No thank You, the railway will bring sinful lifestyles to town. Instead the very small municipality of Ytterby, outside of Kungälv, got the rail connection. This didn't matter much as it was mainly farmland with just a few inhabitants.”

Today the work with the local Masterplan of Ytterby will try to change the situation by creating new housing and better opportunities for trade and jobs locally. And by making a better use of the rail connection to Gothenburg and the bigger labour market of the metropolitan region.



Janez Nared, Ljubjana, at the Kungälv Workshop.

Shifting toward Transit-Oriented Development

Janez Nared, Lead Partner, SMART-MR

After tackling participatory transport planning in Newsletter 1, and regional mobility planning in Newsletters 2 and 3—one on creating regional mobility plans and one on low-carbon logistics—Newsletter 4 raises a new topic: transit-oriented development.

The workshop in Kungälv, which took place on December 12th–13th, 2017, focused on the development of transport nodes. At the workshop, the partners focused on Scandinavia's phenomenon of building new settlement areas and densifying existing ones: the concept of “urban station communities.” The rationale behind this is to optimize and connect transport and spatial planning by introducing a new type of settlement in which the railway station plays a central role. As an intermodal node, it not only provides transport-related services but also attracts other services that are necessary for efficient supply to nearby communities.

The concept combines the

process of suburbanization and post-suburbanization, in which people move out of a larger city due to more affordable living conditions and their wish to live in a greener environment, and the need to commute daily into the same city for work via efficient public transportation that prevents congestion and air pollution.

The workshop not only provided challenging ideas on how to plan residential areas, but it also accumulated the knowledge learned so far by implementing the participatory process, using the potentials of the experts included from the eight metropolitan regions, and following the logic of efficient public transportation and city logistics, as discussed in previous project events. Integration of various aspects is not only important for the learning process within the project, but also in creating urban station communities. To achieve optimal planning solutions, planning must be holistic and integral, which requires certain time and a sufficient level of awareness among

crucial decision-makers, planners, and residents. Cooperation among them must be achieved in identifying needs, mapping potentials, and setting goals. Being future-oriented, new technologies should be deployed to suit the needs of future residents, ensuring good quality of life and resilience of the community that is built.

This opens the floor to the second aspect of transit-oriented development, which will add to the understanding of what urban station communities are and how we can plan them with the opportunities offered by low-carbon technologies. The workshop tackling these questions will take place in Helsinki and will address low-carbon urban areas. The preparations for this workshop have already started and indicate a very intense period for the project team.

Apart from the aforementioned workshop in Helsinki, the project partners will hold two more workshops: one in Budapest addressing transportation management, and one in Porto dedicated to the sharing economy. The workshop in Porto will conclude with an exchange of experience and provide the final information for the

guide, which will collect the experience gained during the project's first phase, present good practices, and provide policy recommendations for making transportation in metropolitan regions more resilient.

At the same pace, activities will be implemented at the level of all eight metropolitan regions included in the project. Partners will continue preparing action plans, in which the engagement of local stakeholders will be of crucial importance because they will be important players in implementing the action plans.

The first phase of the project will end in March 2019, when Porto will host a political meeting, where main project results will be presented to political representatives of all of the participating metropolitan regions. This joint meeting will pave the way to implementing the action plans, which will take place in the second phase of the project.

The intense year ahead will surely offer many interesting project results that will be regularly uploaded to our webpage. Keep following us and get inspired by our presentation video: <https://www.interregeurope.eu/smart-mr/>.

"To achieve optimal planning solutions, planning must be holistic and integral, which requires certain time and a sufficient level of awareness among crucial decision-makers, planners, and residents."



International Steering Group Meeting, Kungälv, December 2017. Photo: Janez Nared.



About SMART-MR

SMART-MR finds solutions and helps local and regional authorities improve transport policies

The key project outputs include a guide on sustainable measures for achieving low-carbon and resilient transportation in metropolitan regions, selected good practice descriptions, and policy recommendations. Through these outputs, as well as dissemination events (such as political meetings, the final conference, and regional stakeholder meetings), SMART-MR contributes to Europe 2020 goals, Cohesion Policy, and the Interreg Europe Program.



**Città metropolitana
di Roma Capitale**

Good practice in Rome: new development near Tiburtina Station

The development is located between the Pietralata and Nomentano quarters, in the northeastern quadrant of Rome, a peripheral area well within the ring road. It brings new functions to the residential area and is thus considered good practice.

Representing an investment of more than €1 billion, partially funded by private investors, the development has required significant improvement of the railways and the station. The modal split with high demand will be 45% on public transport between bus, metro, and rail. Pedestrian and bicycle pathways link the new development with the railway station.

The main authorities and stakeholders involved are the Rome municipality and the Italian Railways (RFI).

www.fsnews.it/cms-file/allegati/fsnews/Tiburtina_Presentazione.pdf



**Good practice in Ljubljana:
The location of residential area
in village Borovnica**

In 2015 the new residential area with more than 50 apartment units was build in village Borovnica, in the distance of 30 km from Ljubljana. It was built by Housing Fund of the Republic of Slovenia and were sold off to individuals by the principle of open calls and tenders.

Buildings are located in proximity of railway station (400 m) and basic services (elementary and nursery school, seat of the municipality, local health centre, library, grocery stores...).



Source: <http://www.najem.stanovanjskisklad-rs.si/Lokacija/13>
Main authorities and stakeholders involved:
Housing Fund of the Republic of Slovenia, Municipality of Borovnica, Slovenian Railway (Slovenske železnice)
Web links:
<http://ssrs.si/>
<http://www.najem.stanovanjskisklad-rs.si/Lokacija/13>.



**Good practice in Budapest:
BudaPart project**

A complex and mixed use development in the city. The core element is the park which is already functioning as a citypark. This project aims to increase the density of the city; to use brownfield sites; to use the existing transport network; to accelerate the development of tram network and to include the bay and the park as part of the city.

Main authorities and stakeholders involved:

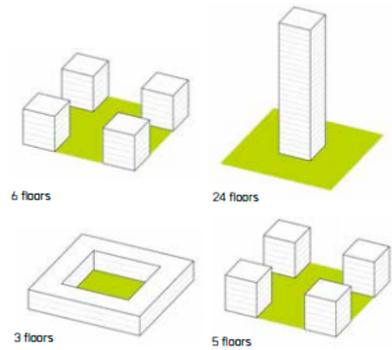
Sustainable Density in Station Communities

Guidelines and indicators for a sustainable density in station communities in the Gothenburg region have been compiled in the report [“Sustainable Density in Station Communities”](#)

The guidelines and indicators are based on recommendations from UN Habitat and previous studies of land use and density in a Nordic context. The location of a station community has been defined as space within one kilometre of a railway station. To study and exemplify what possibilities there are for regional station communities to both densify and at the same time achieve guidelines for sustainable density, the following studies were carried out: a mapping of the present density and its connection to services within regional station communities, and a densification analysis of the Ytterby station community.

The Kungälv municipality and GR collaborate in the SMART-MR EU project where the Ytterby station community forms part of the project’s case study. The Kungälv municipality is producing a comprehensive plan for Ytterby, which, among other things, shall give an account of how Ytterby can be densified from the inside out and increase the proportion of public transport passengers through planning. GR’s focus is on finding a method that explores how to develop the Structural Illustration further.

The mapping of density and service in regional station communities shows there is a strong link between the number



DIFFERENT NUMBER OF FLOORS, SAME PLOT FLOOR SPACE
The floor space index should not be confused with the building design. Here are four plots with the same plot floor space index of 2.0 but with a completely different building design and number of floors.

“Key urban form drivers of energy and GHG emissions are density, land use mix, connectivity, and accessibility”
IPCC, 2015

of residents and workers and the offer of urban activities. When it comes to the diversity of services, however, a certain mix of residents and workers is needed. But to attain sustainable density, a certain distribution of land use is required so that densification does not impact on the need for available open public spaces, traffic spaces, etc.

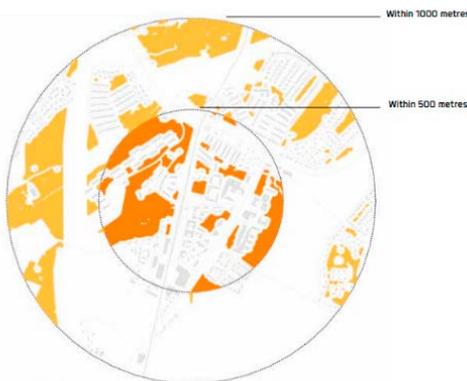
Guidelines for sustainable density therefore include rough indicators for land use in general within station communities. Here, guidelines for sustainable density have been compiled in a number of indicators which are dependent on district floor space, a mix of residents and workers, land use and the distance to a central station. The size of station communities has also been taken into consideration. District



Structural Illustration, GR, 2008.



Example of efficient distribution of land usage.

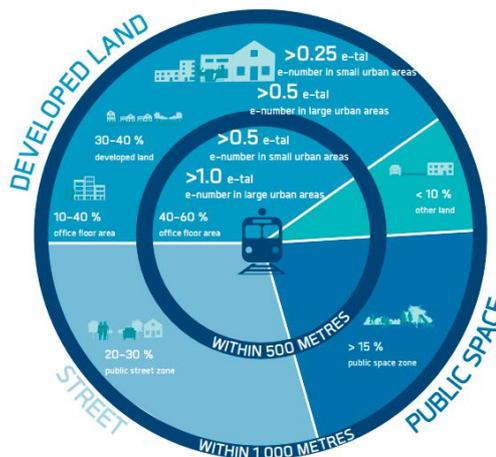


1,000 metres from the station, 25% of the buildable land has been reserved for office premises and public services. Given that every working individual, both in public service as well as the private sector, requires on average 50 sq.m., this densification scenario provides an additional 4,000 workers within 1,000 metres of the station. Base on the figure of two inhabitants per residence, the densification scenario consequently gives an additional 12,000 residents and workers within 1,000 of the station.

Buildable areas in densification scenario, SpaceScape 2017.

floor space is used here as an indicator for density.

To exemplify the guidelines the study applied these on the Ytterby station community within the Kungälv Municipality. A densification scenario for Ytterby shows it has a densification potential of 4,000 additional residences within 1 km of the station. This densification scenario is based on 50% of the total buildable land within 500 metres of the station having been reserved for residences and the rest for office space and public services. Between 500 and



Guidelines for sustainable density in station communities, SpaceScape 2017.

General planning principles for creating sustainable development

Guidelines for density

Guideline 1: Within 500 metres from stations

> 0.5 area floor space index in small urban areas

> 1.0 area floor space index in larger urban areas

Guideline 2: Between 500 and 1000 metres from stations

> 0.25 area floor space index in small urban areas

> 0.5 area floor space index in larger urban areas

General planning principles for creating sustainable land use within 1 km of a station

Guideline 3:

30-40 % of land area should comprise of developed land

Guideline 4:

20-30 % of land area should comprise of public streets

Guideline 5:

At least 15 % of land area should comprise of public space

Guideline 6:

Max 10 % of land area should comprise of miscellaneous land

General principles for creating a mix of residences and offices that will support the local labour market, local services and a reduced car dependency.

Indicator 1: 40-60 % of developed land should be office floor area within 500 metres of a station

Indicator 2: 10-40 % of developed land should be office floor area within 500 and 1,000 metres of a station

Indicator 3: Number of residents and workers is calculated to 80 per hectare in small communities and to 160 residents and workers per hectare in larger communities.

Municipalities:
Municipality of the city of Budapest
XI. District
Transport authorities
Web links:
<http://www.budapart.hu/hu/projekt-bemutatasa>



Good practice in Barcelona: La Sagrera high speed station (under development)

The future station La Sagrera, in Barcelona city (northern part) combines a new (train and metro) station with new housing, commercial, offices and public places (both green spaces and offices).

La Sagrera is creating a new pole near Barcelona city center, along a typical car corridor (La Meridiana), densifying an abandoned area and at the same time connecting the existing neighbourhoods.

Main authorities and stakeholders involved:

Barcelona city council, ADIF and RENFE (train Infrastructure and operating Companies) and Catalan government.
Web links: <http://www.barcelonasagrera.com/>



Good practice in Porto: Rehabilitation Operation of Campanhã-Station

The territory of implementation is characterized by a chaotic dispersion in that the various urban elements, landscaping and infrastructures fragment in a disorderly and without any logical or visible relationship. The land available for construction of the Campanhã Intermodal Terminal (CIT), is an expectant spot and a physical metaphor of urban degradation and the social abandonment of the East of the City. Struck by the rout circular around Porto, and strongly characterized by presence of railway tracks, the location is characterize by discontinuity of the town. The terrain is morphological and topographic dispersed, without clear functions or relations, becoming an imperceptible site and almost uninhabitable, thus functionally difficult and extremely complicated.

Campanhã Intermodal Terminal Project and all the rehabilitation zone around this part of the city intends to generate a qualified territory, of excellence, to live, work and enjoy nature, in an area that today plays a central role in the organization of the metropolitan area and in the articulation between the center and the periphery, that affirms itself as a new and qualified pole of development of the City and Region.

Now:



After:



It is considered a good practice, not only for the role in the sustainability of urban mobility that the intermodal station will allow but also for the integration with the urban rehabilitation of the area.

In fact, the implementation of the proposed territorial strategy foresees the promotion of five strategic axes: (i) economic activity, (ii) sustainable mobility, (iii) qualification of the urban environment, (iv) environmental sustainability, and (v) social inclusion and active citizenship, based on the implementation of a portfolio of structuring projects, which are assumed as key initiatives for the generation of new dynamics of urban regeneration in the eastern part of the city of Porto.

Main authorities and stakeholders: Municipality of Porto, Infrastructures of Portugal, Metropolitan Area of Porto, TIP (entity responsible for the intermodal ticket system), ANTROP (association of the private bus operators), railway, subway and bus users, residents.

Web links:

http://www.porto.pt/assets/misc/img/noticias/MOBILIDADE/2017/Concurso%20Intermodal%20Campanh%C3%A3/Relat%C3%B3rio_Proposta%20Vencedora.pdf

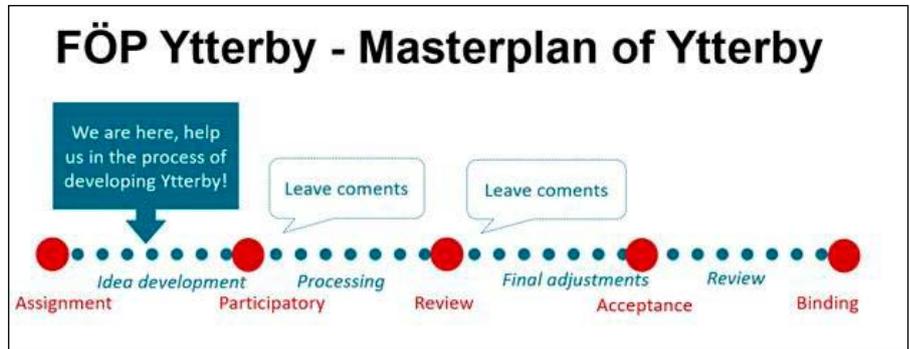
Local Master Plan of Ytterby

The station community of Ytterby is used in the Workshop to exemplify the concept of T.O.D.

The objective of the Local Master Plan of Ytterby is to set concrete targets and visions that have previously only been outlined in the comprehensive plan of Kungälv Municipality in 2010. Ytterby is described by Linda Andersson, responsible planner at Kungälv Municipality, as a station community with great potential. Planning the area should make it possible to develop

new attractive housing close to green areas preferably in a central position that will enable good connection to public transport.

The goal for the land use planning is to use a planning strategy where development is conducted from the centre outwards instead of allowing urban sprawl. This strategy has become doable after the decision was made to move the horse-riding facility from its current central location. This will open up possibilities for transforming the area into a much denser development.



Why using a participatory dialog in Ytterby?

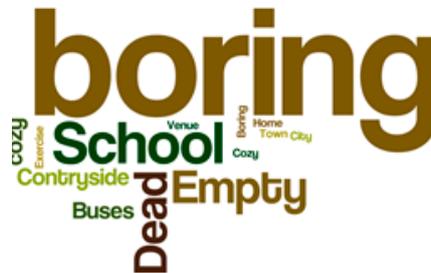
To create an interest in urban planning, Anna Ulvehed, Urban Planner, wanted to explain to the inhabitants of Ytterby the possibilities a change in the land use could have. We wanted to involve them in the democratic process and create an interest

to participate during the planning process making the Master Plan of Ytterby.

In order to understand the inhabitants' own sense of Ytterby, to grasp the identity of Ytterby today, we asked them how Ytterby could be described in one word.

We wanted to build on what is working very well today, what they like and dislike, to keep some of the identity even when the area transforms into more of a sustainable regional station community.

Describe Ytterby with one word!



Results from 7th-8th graders.

We used a core project team for ideas and setting up a questionnaire. It was a joint project with SMART-MR and the questionnaire included questions about travel behavior, daily mobility patterns, destinations and attitudes towards Sustainable Transportation. What does a good commute or transit look like for you?

We wanted to collect knowledge,



Results from the elderly community.

and learn from different groups such as the elderly community, school classes and local business in Ytterby, in order to compare different groups' experiences of Ytterby. To reach even further we included

a web questionnaire. The results show how different the views of Ytterby are!

In addition to the questionnaire, a SWOT-analysis was made with focus groups.



Results from a web questionnaire.

Strengths	Weaknesses
Public transport, natural and rural location, quiet, easy to travel to other places, local service.	The traffic situation, commuter parking, lack of meeting venues, lack of accommodation for young adults, dead and boring society, trade offer, promotion of Ytterby
Opportunities	Threats
Create a more vibrant center, positive attitude towards new businesses and a desire for new activities that can lift the center. Give Ytterby its own identity, Ytterby's promotion, an increased population.	New construction that damages natural values, drug problems, insecurity, the future fate of the Elderly Association, long planning processes, detailed plans that do not allow expansion, traffic situation if not resolved.

SWOT-analysis of transforming Ytterby, summary all focus groups.

Kungälv-Posten

Fredag, 15 december 2017

START NYHETER SPORT DEBATT FOLK FASTIGHETSÄFFÄRER KONTAKT ANNONSERÄ

13 december 2017 14:00



Planarkitekt Erik Liedner från Kungälv kommun guidade en av grupperna runt Ytterby centrum. I gruppen fanns arkitekter och stadsplanerare från Norge, Slovenien och Finland och från Göteborgsregionens kommunalförbund, GR. Foto: Anna Hedlund

Europeiska experter diskuterar Ytterbys framtid

The local newspaper acknowledge the workshop European experts in discussion about the future of Ytterby.



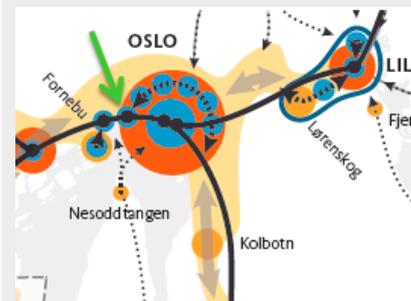
City of Oslo
Agency for Urban Environment



AKERSHUS
County Council

Good practice in Oslo: Area zoning plan for Skøyen

The good practice refers to the area of the transport in Oslo and Akershus (Skøyen is where the green arrow is pointing). The new metro line connecting Fornebu to the city center of Oslo will have a stop at Skøyen. The area will therefore be even more attractive as a residential and working area.



The area zoning plan (recently at public hearing) follows up on the regional plan. It foresees the building of a new metro station in close connection with other modes of public transport to optimize the hub. The plan also has an ambitious densification scheme, which means that approx. 16000 inhabitants can live within 500–1000 meters from the railway and metro. The plan also aims at reducing car traffic in/through the area, and opening up the city to the fjord.

Main authorities and stakeholders involved:

Municipality of Oslo, Ruter (Public transport company), Road Authority, Railway Authority.



Good practice in Helsinki: The development of Tikkurila station community in Vantaa

Tikkurila is the administrative centre of the City of Vantaa and is located on the main railway line from Helsinki to other parts of Finland. Tikkurila was developed in the 60s and 70s and was loosely planned and

built, and dominated by car parks and low storey housing.

The city started the development project in 2007 and created a plan frame for finding the possibilities to infill the station area. The city implemented dismantling renovation and increased the cross floor area by 125 000 k-m² in 7 years. At the same time, the new Ring rail line into the airport was constructed via Tikkurila. The rail company, Finnish Transportation Agency and the city made a joint contract for planning and construction of a new station hub. It contained a new covered terminal for the rail lines, large shopping centre with office buildings and a multi-storey car park for offices and P&R. Besides the transportation hub, the building project included also business premises to infill the economical expectations of the private investors. The site between the railroad and the street was extremely narrow, and the construction was not allowed to cause any trouble for the rail traffic. That is why cooperation with all the involved parties was a key issue during the whole process.



Now Tikkurila is one of the most desirable areas in Vantaa and it offers good connectivity with excellent services and modern housing for new residents. The different sides of the main railroad are better connected and the quality of the new public spaces is much higher than earlier.

Main authorities and stakeholders involved:
City of Vantaa
Finnish Transportation Agency (FTA)
VR Group Ltd
Real estate investors



Good practice in Gothenburg: Mölnlycke station community, Local Master Plan

The Mölnlycke Community has a long history as a station community. Large parts of the area are built as single housing estates but in recent years the ambition is to follow the regional agreements made within the Gothenburg Region structural

Walk&Talk in Ytterby

The purpose of the Walk&Talk workshop, organized in collaboration with the Mistra Urban Futuresproject Urban Station Communities, is to showcase a participatory approach to site investigation and analysis related to the planning of urban station communities. "Walking Tour" is a method that is useful as part of a wider site analysis when planning and designing urban station communities and other type of communities. The method has the advantage of making it possible to catch different stakeholders' subjective experiences and perceptions of the physical environment.

A walking tour was organized by Anna Gustafsson, GR, Anna Ulvehed, Jenny Bjönness Bergdahl, Kungälv Municipality and

Ulf Ranhagen during the site visit of Ytterby station community. During the SMART-MR workshop both European experts and local experts from Kungälv municipality participated to showcase the methodology.

For an ordinary walking tour local experts, ordinary citizens and other stakeholders can participate during different seasons and during different times of a day. Important incentives for using this specific method is that it supplements desktop-oriented, "objective" methods for the analysis of measurable factors/indicators such as urban density, measured distance between the station and target points/functions in the surrounding areas, mix of functions, green factors, spatial configuration, spatial integration (using space syntax) etc.



Walk&Talk photos: Berenguer Gangoells, Javier Ortigosa.

One practical way of performing the walking tour is to use a **walking tour record** and a **walking tour map** for taking notes on strengths, weaknesses and ideas for improvements for selected key issues as accessibility, security and safety, environmental variation, supply of service functions etc. Notes can for example be written down related to selected spots (places) where it is particularly important to get the subjective impressions from the stakeholders.

After the walking tour, it is recommended that the participants gather and summarise their main impressions, for example by making a common map-based SWOT-analysis of the visited area. Post-its with different colors representing strengths, weaknesses and ideas can be located on the map, for selected key issues. The material

can be used as a basis for a more profound analysis of different aspects, as a basis for the formulation of objectives and targets, and as basis for the development of scenarios in the short and long term etc. Experiences from the application of this method and related tools in different planning contexts can be introduced at the beginning of a seminar day.

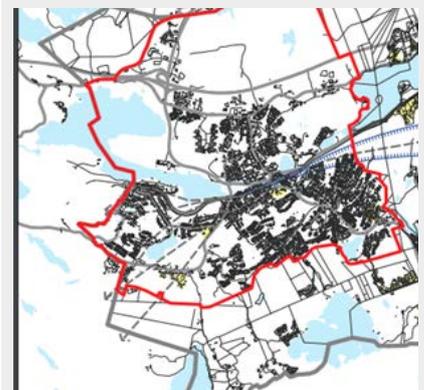
For this site visit, at the Ytterby station community, three different working tours were designed and a SWOT analysis on maps was created by the participants.

Ulf Ranhagen

Senior Professor, process leader of the Urban Station Communities Project
Find out more about the Urban Station Communities project at <https://www.mistraurbanfutures.org/en/project/urban-station-communities>

illustration. This means that the station community of Mölnlycke should be subject of densification. Areas outside of 1 km from the station should only be developed if Public Transport is present. The development is regulated in local detailed plans, within the red marking in the map below, and should follow the incentives made in the master plan.

A study was done a couple of years ago that analysed the present situation and introduced urban qualities as part of the development strategies. The strategies visualized how urban service categories can be increased in terms of numbers and diversity, accessibility to green areas could be enhanced and how a low speed street network could be interconnected.



By using a vision for how the community should ideally be developed, the municipality has used different analyses and policy recommendations to realise a now thriving urban station community.

In the Catch MR project central “Mölnlycke was described as a success story in the Gothenburg region. Most notably, the case can be construed as an example of how pull factors (attraction) can be leveraged through long-term, consistent planning. Local politicians and planners have been confident that the area is an attractive place for people to live in and for developers to build in. Thus, they have not found it necessary to introduce “push” (don’t develop here) factors, which might jeopardize the steady long-term growth.”

Main authorities and stakeholders:

The local municipality of Hårbyda

Web links:

http://www.spacescape.se/wp-content/uploads/2015/05/projektrapport_molnlycke_130425.pdf



Workshop session after Walk & Talk.

Panel discussion between Swedish stakeholders

Why is developing around train stations important?

Rapid urbanization urges us to find new ways of building our cities. The individual use of cars is not the future but this fact is not yet accepted. Cities need to be sustainable and resilient. One strategy is to treble the use of railways and double the modal split of public transport. The regional strategies in Gothenburg are in place but we need to discuss what kind of society we want to offer the regional inhabitants. Discussion between political parties differs on what to invest in regarding new infrastructure.

Today there is a lack of rail capacity. Planning new housing and services close to rail stations, or other transit hubs, enables people to live there. This gives incentives to invest in rail capacity. People living in the surrounding countryside can use the station using private cars or local feeder buses. Both cars and public transport must complement each other. Everyday life must be practical. Understanding the needs of future mobility, and what kind of society we want to live in, is essential.

The railway station as an interchange between local, regional and national modes of public transport. The station also acts as a node in a polycentric regional structure and creates access for people on foot and bicycle by connecting the surrounding area on both sides of the rail tracks with the region.

By developing housing, offices and services that depend on regional access, the functionality of the station will increase. The challenges involve the design and function of the station, both in relation to the overall railway system, and to the demands of urban development. This includes accident prevention, noise and vibration issues and overcoming railway barrier effects.

Is this relevant for metropolitan regions?

Commuting and encouraging people to change their mode of transport is important, but we should also think about how to reduce the overall need for transport and focus on creating sustainable societies. We should plan the city. Does quality of life include commuting 2h a day? The people are the ones who decide and not the planner!

It is important to plan how transport is provided for all people. A dense city can provide you the possibility to walk to everything you need, or to use a bicycle. Remember that 2/3 of the inhabitants of Gothenburg doesn't own a car, either because they don't want to or they can't afford one.

In the future, it is important to think about scarcity – what will happen if we can't travel due to lack of energy? More thoughts are needed about creating a mix of travelling patterns, not just about how people from rural areas are connected to the city.

What is important when densifying a station community?

Imagine creating a society where you want to live and work and then plan from that perspective. We should have better cooperation between different levels, national and local. Use an inclusive approach, plan things together, share the picture, plan what we want to achieve, plan things with young people (young people are concerned with the future so we need to talk to them!).

Make sure all interests are represented and all stakeholders. A new version of planning, more comprehensive, more future oriented the Panel finally concluded.

Partners reflexion after workshop

To pick up ideas and reflections after returning home, partners were asked to reflect on the following: consequences of a density increase, failing to create density, and if the intentions to create sustainable mobility using GR's "Structural Illustration" can be met. All Partners gave a positive response to the workshop and sent plenty of reflections. Here is a very condensed version!

In the **Ytterby case**, as for all station communities, the aim is to create a nice place to live and work in. To achieve this, and at the same time have regional connectivity, there are certain drivers recognised for development.

Drivers for creating density are said to be **accessibility, complexity and diversity**. More people could mean a mix of ages, households, income, backgrounds and different professions.

More houses could mean a greater mix of housing types – flats, row houses, detached – and of different prices and sizes. These drivers for change could also mean an economic growth fuelled by regional connectivity and better interaction with the regional core and the hinterland. The station community will be a place where more activity occurs and which is becoming more interesting.

To make **densification as something positive**, all stakeholders need to participate in formulating and accepting the common future of the station community. Otherwise there is a risk of, for example, creating too much of a dense area losing sight of its identity, green areas and just creating a hub for cars from the hinterland seeking regional connectivity or a homogeneous dormitory and boring place. Rapid population increase could also cause social conflicts. While developing a dense area it is essential to ensure urban quality.

T.O.D. was seen as a good method that helps all stakeholders to see the bigger picture and to include quality and liveability in its approach. If it fails, people will move somewhere else and possibly increase urban sprawl. GR's structural Illustration is well supported by using T.O.D. at a local level.



Partners and Stakeholders at the last day of the Workshop in Kungälv. Photo: Janez Nared.

Conclusions from the SMART-MR workshop

The Workshop started from a Transit Oriented Development (T.O.D.) perspective. The results from the pre-Workshop Inventory indicated that a clear definition of what we have called a “Station Community” is in order. The definition of a station area needs to include a train station or a similar transit hub, have a compact and dense design and include both housing and services. A Station Community should have a walkable design and at the same time have regional connectivity by public transport and connections to its hinterland. As a “Station Community” is not generally recognized outside the Nordic countries, but nevertheless developing in and around a station area is, we need to consider adopting a new vocabulary for this kind of development.

Highlights from SMART-MR Inventory

The Inventory considered development in and around a station to have an important role in regional transport corridors and is often promoted in regional policy documents in our SMART-MR Partner regions. Development is, more often than not, shared by local stakeholders, such as transport operators and municipalities, with regional planners. Surprisingly, the general public, such as local inhabitants, local industry representatives or service providers, are not involved in shaping the area in a participatory development process.

The Inventory also discussed the T.O.D.

methodology. T.O.D. was considered as having a weak connection to regional and cross-sectoral planning and being too much of a checklist or step by step planning method. Consequently, there is a risk that the method is missing the bigger picture such as aiming for sustainable development. The T.O.D. main drivers were considered to reduce car use, causing less congestion and pollution by avoiding urban sprawl, and increasing accessibility by achieving regionally connected and affordable land for development.

Could a planning concept including the liveability aspects, be called “Liveability Oriented Area Development, LOAD”?

Integrated transport and land use planning

All partner regions consider integrated planning, transport and land use planning, as an important instrument for creating sustainable development. This concept was introduced in our previous project, Catch-MR. Some partner regions pointed out that plans often face problems at the point of implementation. Is this caused by allowing parking next to the station or transit hub? Insufficient public transport provisions (especially off-peak in the middle of the weekday and on weekends)? Poor connections to the hinterland? Or is it caused by having a too narrow and not an implemented integrated transport and land use perspective?

To explore what is missing in the T.O.D. planning methodology the Workshop introduced an alternative methodology supported by the study “Sustainable Density in Station Communities”.

From T.O.D. to LOAD

The Newsletter has on previous pages described the study, a SWOT analysis of the methodology, and also presented the work on the local master plan of Ytterby. The study exemplified what kind of results could be expected when applying the suggested methodology. The methodology use densification and specific shares of land use principles obtaining a green, mixed and easy access area. By applying these principles and recommendations on our case study, Ytterby could reach a theoretical potential of more than twofold

the present number of inhabitants and jobs within 1 km radius from the station.

Using the above input in several discussion sessions, the workshop worked on formulating a SMART-MR conclusion for development in and around a station or transit hub.

The workshop conclusions

We concluded at the workshop that Transit Oriented Development is a narrow definition that focuses too much on transport. Developing an area must be far more dedicated to the unique identity of a specific area and the people living there, now and in the future. Development is all about creating something attractive and liveable for generations to come. This can be done by starting the planning process from the opposite direction to transport.

- We propose to use what is considered to be a sustainable development perspective, combining the three dimensions: economic, environmental and social development.
- We believe that an area developed with dense housing, mixed use and liveability targets will create attractiveness.
- We use a methodology that is based on UN Habitat’s guidelines.
- We recommend considering these guidelines as an inspirational tool for development, and using the set principles outlined as goals. Be flexible as how to reach these goals.

The SMART-MR workshop has focused on small station areas with 5-15 000 inhabitants and a 1 km radius development area. The same, but modified guidelines, can be adopted to other developing areas.

By adopting UN Habitat’s recommendation for sustainable density, evaluate the progress to achieve set goals by using indicators.

Include and empower all stakeholders in a participatory planning process to share and agree on the goals and indicators proposed. Use, for example, a SWOT analysis to share and gain common understanding of all the different perspectives of an area.



Per Kristersson, GR, summarizing the workshop. Photo: Janez Nared.

Urban and metropolitan structure for sustainable mobility and livability in Barcelona

The structure and scale of cities has been historically dependent on the existing transport means. The expansion of many cities in the 18th and 19th centuries had many different causes—e.g. the defortification of cities, the economic growth and industrial revolution, the need of street sanitation— but also to accommodate flows of people and goods that travelled in streetcars and railways. That resulted in regional structures based on railway networks and urban patterns composed of wide avenues and boulevards with public transport. Unfortunately, these structures gave way, in the 20th century, to urban sprawl, congested streets, and a system of highways that segregated urban fabrics and promoted car dependency (Mumford, 1963). Consequences and impacts of this model are well known for us today, however, after so many years investing it, a change is much more difficult.

Transport planners are trying to revert car dependency by promoting regional public transport networks and attracting car users to the nodes of these networks. This strategy has been applied in many

European cities, one of the most famous was the Copenhagen Finger Plan (see Knowles, 2012). In the U.S., where the effects of a car oriented development are much widespread, some renowned urban planners promoted the 'new urbanism' movement that advocates to recover the way that cities were built before the automobile advent (CNU, 1993). This urban and regional structure based on public transport was named Transit Oriented Development (TOD) by Calthorpe (1993) and it is one of the pillars of the new urbanism.

TOD is also associated to the concept of a Traditional Neighborhood Design (TND) that aims at achieving compacter environments—higher density, mixture of uses, street continuity—that foster and trigger activities and enable a more sustainable mobility, especially for walking and biking. This is especially important because urban sprawl and car dependency cannot be solved only by looking the transport problem. We need neighborhoods and suburbs with a human scale, places of interaction and mixture

(also social class mixture to balance demand and supply of activities), and with a local identity.

Barcelona's Metropolitan Area is composed of 36 municipalities, has a population of 3.2 million inhabitants, and occupies 636 km², 52% of which are natural and agricultural spaces. The metropolis is very dense, two thirds of the population live in compact urban fabrics, and there are many historical centers with strong identity. Overall, car usage is lower than many other metropolitan areas, and many trips are done on foot, especially in the central conurbation. However, since Barcelona city attracts most of the trips from the metropolitan area and region, many efforts were put in the past into building a system of highways that induced even more car demand, segregation of uses, and urban sprawl. Additionally, public transport accessibility drops significantly outside the center (Figure 1). In such a compact environment, the negative effects of traffic and infrastructure (e.g. pollution, space occupancy, segregation) are greater than in other cities.

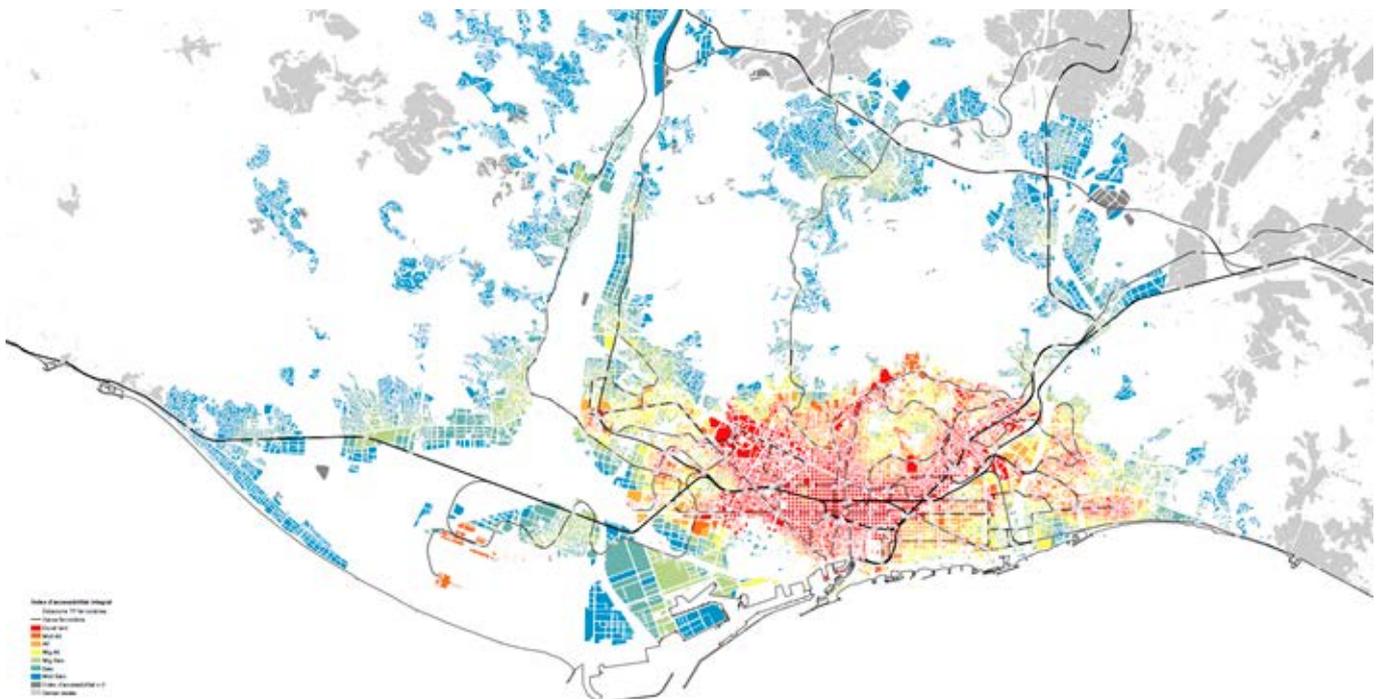


Figure 1. Public Transport accessibility at Barcelona's Metropolitan Area (Recio et al., 2018).

Currently, the metropolitan administration: Barcelona Metropolitan Area (AMB), is in the process of drafting a new metropolitan urban master plan (PDU) which will define how the metropolis should evolve in the next decades, and obviously, transport issues take a very relevant role in it. Our integrated vision on mobility and urban planning it is based on the following objectives:

Accessibility. A settlement model that promotes proximity to activities and services. Based on TOD principles to: i) condense sprawling suburbs into denser and more complex environments around local centralities and public transport nodes; ii) promote mixed uses, social diversity and demand for activities to balance trip attraction of the central metropolis; iii) develop more urban intensity around new public transport lines and vice versa.

Integration. An urban structure to enhance social cohesion and livability whose priorities are to: i) overcome infrastructure fragmentation and take advantage of urban interfaces; ii) establish metropolitan continuities to vertebrate urban territory promoting walking and cycling networks (e.g. through the historical road network); and iii) recover urban road space from traffic to increase sustainable mobility and green infrastructure (Figure 2).

Efficiency. A sustainable mobility to address the metropolis challenges focusing on: i) intermodal public transport networks as the main mobility arteries; ii) reduction of car use through promoting modal split and regulation of: road space, access and parking; and iii) guiding technological change towards improving livability in cities according to the objectives above.

Sustainability. A system that minimizes economic, social and environmental impacts and externalities. We need to increase awareness of the total generated mobility and its consumption of resources and plan cities accordingly.

Cities and metropolitan areas are thriving places of interaction and opportunities that will continue growing in the future. It is vital, however, that we find the metropolitan structures that can support a fair and sustainable urban mobility making, at the same time, cities places to live.

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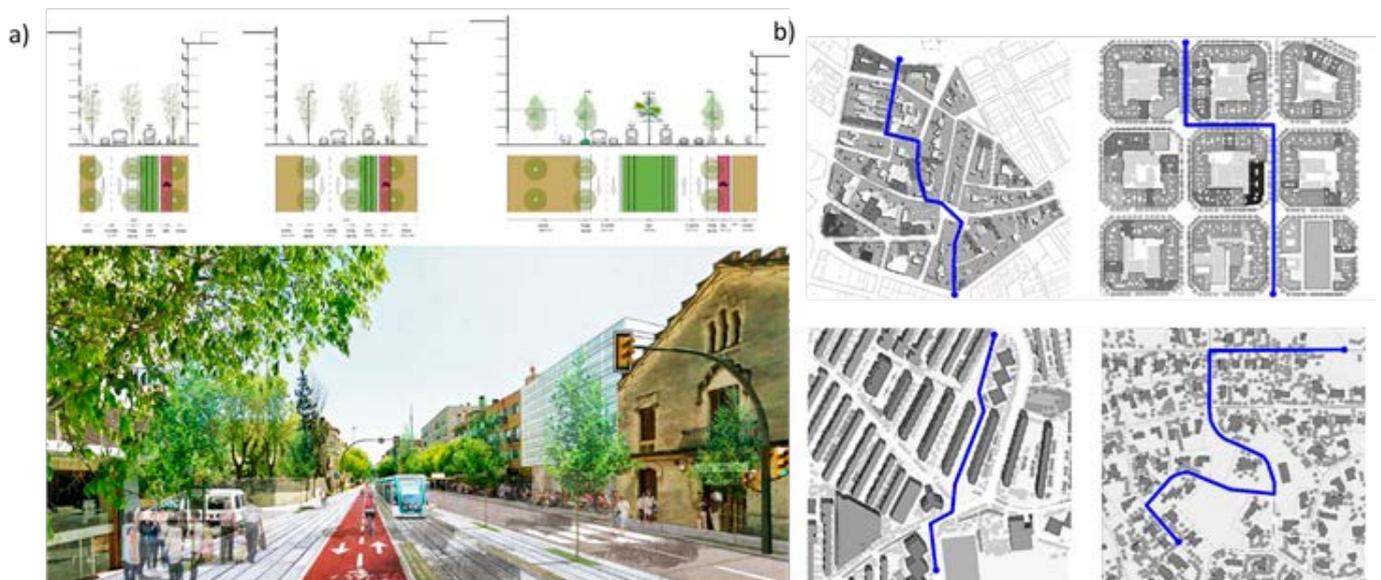


Figure 2. a) The historical “Carretera Reial” integration project (DSU-AMB, 2017); b) urban fabrics in Barcelona’s Metropolitan Area and their walkability (SRPD-AMB, 2017).



Metropolitan region	Partner
Ljubljana	Scientific Research Centre of the Slovenian Academy of Sciences and Arts 
	Regional Development Agency of Ljubljana Urban Region  RRA LUR <small>regional development agency of Ljubljana urban region</small>
Oslo/Akershus	City of Oslo, The Agency of Urban Environment  City of Oslo Agency for Urban Environment
	Akershus County Council  AKERSHUS County Council
Göteborg	Göteborg Region Association of Local Authorities  The Göteborg Region Association of Local Authorities
Helsinki	Helsinki Region Environmental Services Authority  HSY
Budapest	BKK Centre for Budapest Transport  BKK BUDAPESTI KÖZLEKEDÉSI KÖZPONT
Rome	Metropolitan City of Capital Rome  Città metropolitana di Roma Capitale
Porto	Porto Metropolitan Area  ampporto
Barcelona	Barcelona Metropolitan Area  AMB Àrea Metropolitana de Barcelona

Interreg Europe project SMART-MR (Sustainable measures for achieving resilient transportation in metropolitan regions) supports local and regional authorities in eight European metropolitan regions to improve mobility policies. It also aims to provide sustainable measures for achieving resilient low-carbon transportation and mobility in metropolitan regions of Barcelona, Budapest, Göteborg, Helsinki, Ljubljana, Oslo/Akershus, Porto and Rome. Project will be running from April 2016 until March 2021 and coordinated by Anton Melik Geographical Institute of the Scientific Research Centre of the Slovenian Academy of Sciences and Arts and funded by European Regional Development Fund.

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