

Project Summaries

RESULTS INPUT IN A GEOGRAPHICAL INFORMATION SYSTEM

Select stops, terminal areas and their environs were surveyed for accessibility. The most relevant accessibility information was saved in a geographical information system to facilitate the planning of improvements.

During the project, two interest group seminars were organised. The first was held upon completion of the accessibility surveys. Participants examined current shortcomings in groups and suggested improvements. The second seminar was organised as the general plans and standard stop designs were completed.



AIMING FOR AN ACCESSIBLE QUALITY ROUTE SYSTEM

The general plans for an accessible public transport line and the model for a standard bus stop are ready for further development. Practical implementation processes can also gradually be launched. A long-term objective is to create an accessible quality route system. The solutions can be implemented across the country.

MORE INFORMATION

Report: Esteli, Espoon esteetön joukkoliikennelinja 19 (Accessible Public Transport Line 19 in Espoo)

Electronic version is available in Finnish on the Elsa programme site: www.elsa.fi

Accessible Pilot Line: Tampere City Transport Line 25



The project examined the current accessibility state of Tampere internal bus transport and suggested possible targets for improvement. The current situation was evaluated by means of a pilot line, which was the Tampere City Transport line 25.

Accessibility of the line was studied using the door-to-door principle. All parts of the bus journey from information needed before the journey to the customer service provided by drivers were surveyed.

The results led to the conclusion that there are several ways to promote accessible city bus transport that is available for all.

SEVERAL WAYS TO PROMOTE ACCESSIBILITY

Suggested ways to promote accessible internal bus transport in the City of Tampere included implementation of accessible district bus stops, driver training, informing of passengers and amendments to the purchase criteria for buses. Improvements were proposed also with regard to accessible passenger information.

A proposal for action aiming at implementation was created for the stops on the pilot line 25. Some of the proposed measures are immediately implementable whereas others can be best realised in connection with other road maintenance work.

Within the framework of promoting accessible public transport, the City Transport is responsible for improving passenger information, developing the existing service point and the bus stock, training of drivers and other personnel, instructing passengers and attending to the naming and numbering of stops.

The City of Tampere Department of City Planning and Infrastructure Management is responsible for the development and maintenance of bus stops and routes to stops, maintenance of the fitting level of stops as well as traffic lights and traffic signs.



ELSA PROJECT SUMMARY

August 2005

Responsibility for the fitting level of stop shelters featuring advertisements rests on the advertising company. Plot owners are responsible for the maintenance of respective sidewalks and stops on them.

PASSENGER-CENTRED APPROACH AS A KEY PRIORITY

A user team consisting of passengers from various passenger groups participated in the project. Together with the user team, the stops along the route of line 25, as well as local transport terminal areas, buses, the Tampere City Transport service point and various passenger information products were examined.

Passengers' views on winter-time travelling were charted by means of an internet survey that was filled in by nearly 300 respondents.

The survey covered all stops on the route of line 25. The characteristics of the line, passenger behaviour and driver performance were examined by travelling on the line. Procedures and methods were charted by observing the service provided by drivers and the personnel of the service point. Purchase of stock and existing guidelines were also surveyed.

The survey was financed within the framework of the Elsa programme by Tampere City Transport, the City of Tampere Department of City Planning and Infrastructure Management and the Ministry of Transport and Communications.

MUTUAL UNDERSTANDING INCREASED

The survey increased mutual understanding on both the needs of various passenger groups and the limitations to operations.

During the project, contacts between organisations for the disabled, the City of Tampere Department of City Planning and Infrastructure Management and Tampere City Transport were established. Future co-operation is welcomed.

MORE INFORMATION

Electronic version (PDF) of the final report is available in Finnish at:
<http://www.elsa.fi>

Manager of Transport
Mika Periviita
Tampere City Transport
tel. +358 50 326 7007
firstname.lastname@tampere.fi

Planning Engineer
Jukka Kyrölä
City of Tampere, Department of City Planning
and Infrastructure Management
tel. +358 50 5969 178
firstname.lastname@tampere.fi

Project Manager
Ville Tuominen
Ramboll Finland Oy
tel. +358 20 755 6877
firstname.lastname@ramboll.fi

Development of Helsinki Service Routes – Preliminary Survey and Pilot Testing of Demand Responsive Transport Routes Available for All

DEMAND RESPONSIVE TRANSPORT TESTED IN HAAGA AND TÖÖLÖ

The project surveyed different alternatives to develop demand responsive service transport in Helsinki. Different alternatives were compared with regard to accessibility and other service level aspects and also with regard to their feasibility. For planning purposes, also the need for demand responsive transport within the area of operation of the current Haaga service route was surveyed. Based on the comparisons, two operation models were chosen for testing: In Haaga, the suburban demand responsive transport service was piloted alongside a conventional service route whereas in Töölö, the demand responsive service route was the only one used.



The informing of and impressions evoked by demand responsive transport services were surveyed from the user perspective. Advantages and challenges of demand responsive transport were compared with those of other available solutions. A target impression and related demand responsive transport service commitment were established. To enable accessible informing, various information strategies were examined. A summary of the above-mentioned factors was reported to target groups before and during the piloting process.

The piloting processes were launched in May 2005 and they were completed in the end of March 2006. In autumn 2005, a user survey was conducted. Based on the results, the service was improved.

February 2006

Demand for the service was surveyed based on the travel data of Transmation Oy Helsinki regarding customers entitled to service based on the Act on Services for the Disabled. All transport data was handled anonymously and only street names without house numbers were used. Demand of customers other than those entitled to service based on the Act on Services for the Disabled was estimated using the Helsinki City Transport EMME/2 transport planning system.

INFORMING OF ACCESSIBLE MODES OF TRANSPORT IMPROVED

The project results have been and can be directly utilised when developing Helsinki City Transport demand responsive public transport services and other accessible modes of transport. The planning of accessible information strategies as well as the creation of accessible information, mental pictures and brands that were a part of the project can be applied to other projects for accessible transport.



FINANCIERS

The project was part of the Research and Development Programme for Accessibility (ELSA). The project was financed by the Ministry of Transport and Communications, Helsinki City Transport and Transmation Helsinki Oy.

MORE INFORMATION

www.elsa.fi

Planning Chief
Seppo Vepsäläinen (until 1 March 2006),
Ville Lehmuskoski (after 1 March 2006)
 Helsinki City Transport
 tel. +358 09 472 2301
firstname.lastname@hkl.hel.fi

Project Manager
Teemu Sihvola
 WSP LT Consultants Ltd.
 tel. +358 020 7864 323
firstname.lastname@wspgroup.fi

Development of Service Routes in the City of Kotka

The primary objective was to promote accessible and effective public transport in the city of Kotka, where the decrease in passenger volume threatened to cut back the supply of local bus transport. Another aim was to promote accessible public transport by increasing the number of accessible low-floor routes.



TO TRANSPORT OPERATIONS

The project examined two alternative ways to organise the future local transport in Kotka and selected an operations model. Under the new transport model, Sunday and holiday traffic remain scheduled. Some weekday routes were eliminated but two new substitutive city transport lines (11 and 25) were introduced. The new routes are operated entirely as scheduled traffic. Line 34B will be operated by a purchased transport operator. The model is financed by raising the tram fares paid to the transport operator. The new transport model was introduced on 15 August 2006.

In addition, the project produced a summary of Kotka service transport, defined the expansion targets of the service transport route system and examined possibilities to use service routes for social services' transportation needs.

BETTER ACCESSIBILITY OF CITY TRANSPORT

Accessible city transport is promoted through the following measures:

- After 15 August 2006, line 34B (Karhula-Lajakoski) operates as a low-floor minibus service transport. The schedule and route remain unchanged.
- Saturday schedule between Tiutinen and Karhula (line 5B) will be supplemented with additional buses that operate as low-floor minibus service transport.
- Transport operators commit to developing the vehicles with the aim of one new low-floor bus each year. In 2005, approximately 67 per cent of Kotka city transport used low-floor equipment. In summer 2006, 7 new low-floor buses were introduced.
- After 15 August 2006, Kotka local transport offers free transport for people pushing a pram (mother/father), the child in the pram and other under 7-year-old children of the same family (previously children under 4 years of age were entitled to free transport)

FUTURE EFFECTS OF THE PROJECT



To facilitate its future decision-making, Kotka city administration was provided with information regarding the local transport operations model. Also the expansion needs of the service transport system were reported to the city administration. The local transport reforms and service transport expansions were implemented with immediate effect on 15 August 2006. The reforms and expansions benefit local transport users by offering more service lines and retaining the existing lines under circumstances when major cutbacks to night time transport were imminent.

The project was financed within the framework of the Elsa programme by the city of Kotka and the Ministry of Transport and Communications.

MORE INFORMATION

Electronic version of the report is available in Finnish at www.elsa.fi

Accessibility in Quality Corridors

FURTHER DEVELOPMENT OF ACCESSIBLE QUALITY CORRIDORS DESIRABLE

Public transport quality corridors are an important part of regional transport systems. Accessibility is the key developmental priority. In the project LaatuKetju, the following observations and proposals for measures were made:

- Accessible quality corridors serve the elderly and people with reduced mobility and function of only a restricted nearby area.
- Examining only the standard transport service that operates along the quality corridor is not enough to promote accessible transport. Modes of transport that complement the quality corridor operation, such as service routes and demand responsive transport need to be simultaneously examined. It should be clarified how such modes of transport are linked to the quality corridor, how they are aligned with services and how cost-effective the resultant system is.
- The level and range of quality corridor services should be defined and clear regional service objectives should be set. Service levels make it possible to estimate how the quality corridor services are directed at different user groups and what supplementary public services are needed within the range of the quality corridor.
- If the principle of quality corridors is integrated into regional and municipal strategies, the implementation and level of quality corridors can be promoted. When implemented separately, the promotion means remain fairly minor but they nevertheless require that opinions of several parties are taken into consideration. Implementation of individual measures has thus often failed due to, inter alia, complex decision-making processes.
- Accessibility needs to be extended to the attainability of services as well. This requires that the issue be integrated into strategies.



The project evaluated quality corridor action plans and assessed the implementation of outlined measures. To make an up-to-date review of the current quality corridor situation, a field survey focusing particularly on stops and their environs was conducted. User experiences regarding accessible services were examined more thoroughly in meetings with local accessibility working groups and also by means of user surveys.

ACCESSIBLE CORRIDORS AS A PLANNING AND DECISION-MAKING THEME

Deepened perspectives and developmental preferences produced by the project can be put to use on both the strategic and programme levels. Accessible quality corridors are integrated into for example the following processes:

- preparation of regional land-use plans and regional development plans
- preparation of master plans and definitions of municipal public transport service levels and resource requirements
- structuring of customer interfaces of public transport services
- in-depth approach to accessibility criteria and accessibility knowledge in planning and decision-making.

The project was financed by the Kouvola Region Federation of Municipalities, Road District of Southeastern Finland, City of Tampere, Tampere City Transport, Häme Road District and the Ministry of Transport and Communications.

MORE INFORMATION

www.elsa.fi

Joensuu Quality Bus, Walking and Cycling Corridors

QUALITY CORRIDORS ARE HIGH LEVEL CONNECTIONS

Public transport quality corridors have large passenger volumes and considerable passenger potential. Quality corridors attract passengers with a wide supply of services and high quality transport environments.

Non-motorised traffic quality corridors are high level main routes connecting neighbouring municipalities to cities or residential areas to city centres. Quality corridors are fast, safe, attractive and accessible connections that stand out due to their appearance and fitting level.

Both types of quality corridors aim to attract more private car users.

The project defined the quality walking and cycling and quality bus corridors from the key regional routes in the city of Joensuu and the neighbouring municipalities of Kontiolahti, Liperi and Pyhäselkä. These routes are:

- Joensuu-Ylämylly, approximately 13 km
- Joensuu-Kontiolahti, approximately 21 km
- Joensuu-Reijola-Niittylahti Training Centre, approximately 12 km

The project supports the Joensuu region master planning process, transport system planning and regional accessibility promotion measures.



SYSTEMIC DEVELOPMENT OF TRANSPORT MODES

Objective quality corridor levels were set and measures for improving the routes were outlined. Principles for the development of transport supply, stop environs and walking and cycling routes were also defined. The action plan included a timetable, a tentative cost-estimate and appointed liability parties. The implementation of small and quick projects was proposed for the years 2005–2007 whereas the suggested timeframe of long-term measures was 2007–2015.

The developments were proposed as individual, transport mode -specific measures and comprehensive project packages. The project packages allow developments that cover both public transport and non-motorised traffic. Implementation requires mutual will of all involved parties. This is pursued for example with the preliminary contract for the transport system plan.

POSSIBLE MEASURES FOR PROMOTING ACCESSIBLE QUALITY CORRIDORS

- Emphasising gentle vertical geometry as a non-motorised traffic quality corridor selection criterion.
- Building non-motorised traffic rest areas.
- Promoting accessible and safe stop environs at the Joensuu Central Hospital.
- Altering the routes of more lines to pass the Central Hospital. This facilitates travelling to the hospital and thus improves the travel chain.
- Observing accessibility when developing stops.
- Improving public transport information and introducing stop-specific schedules.

The project was financed within the framework of the Elsa programme by the Ministry of Transport and Communications and the Finnish Road Administration. Local financiers included the City of Joensuu and the municipalities of Liperi, Pyhäselkä and Kontiolahti.

MORE INFORMATION:

Tiehallinnon julkaisu TIEH 1000095-05, ISBN 951-803-544-X (Publications of the Finnish Road Administration)

Electronic releases: TIEH 1000095-v-05, ISBN 951-803-545-8

Electronic version (PDF) is available in Finnish at:

<http://www.elsa.fi>

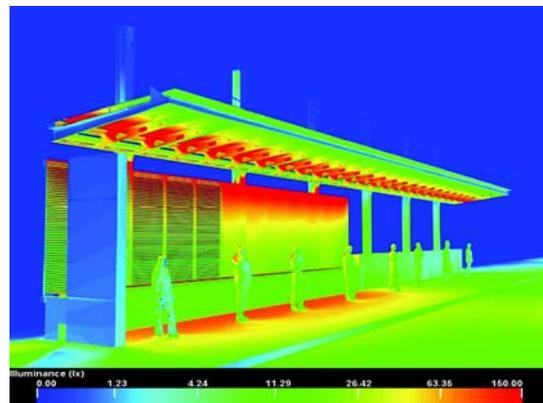
Accessible Lighting and Colour Contrasts in Public Transport Terminals and Related Environments

THE VISUALLY IMPAIRED AS A TARGET GROUP

The project surveyed the lighting and colours of terminals and related environments for accessibility and produced planning guidelines.

To outline the current situation, a literature survey for relevant background information, current recommendations as well as for procedures and methods was made. The target group consisted of the ageing and the visually impaired, a growing population group which puts more pressure on the planning of a future environment promoting independent mobility. Public transport facilities are a key priority in developing a seamless travel chain.

In Helsinki, user tests were conducted at Itäkeskus metro terminal, the stairs of the Iiris Service and Activity Centre for the Visually Impaired serving as a special test target. Other test sites were the Leppävaara station in Espoo, the Jyväskylä Travel Centre and route from the Travel Centre to the future local transport station.



DIVERSE WORKING AND RESEARCH METHODS

Working methods included field investigations, user surveys, lighting surveys, accessibility surveys for plans, closer examination of select special areas, modelling and laboratory user tests of contrast markings. Entrance areas, platform areas, underpasses and stairs were selected for special examination. During the project, a prototype HDR-display for simulating major differences in luminance was also built.

PLANNING RECOMMENDATIONS

The project produced new guidelines for the outdoor lighting of terminal environments. It is recommended that these new guidelines for the intensity of lighting in different parts of terminal areas and as well as the new guidelines for general lighting be used in planning and maintenance of public transport stops, terminals and related environs. It is also advisable that the new lighting recommendations be used when the lighting of other public outdoor areas is planned.



FINANCIERS

The project was part of the Research and Development Programme for Accessibility (ELSA). The project was financed by the Ministry of Transport and Communications, the Finnish Rail Administration, the City of Helsinki Public Works Department, Helsinki City Transport, Helsinki Energy and the cities of Jyväskylä and Espoo.

MORE INFORMATION

Liikenne- ja viestintäministeriön julkaisuja 39/2006; Esteetön valaistus ja selkeät kontrastit asema-alueilla. (Publications of the Ministry of Transport and Communications 39/2006: Accessible Lighting and Colour Contrasts in Public Transport Terminals and Related Environments.)

Electronic version of the report is available in Finnish at: www.elsa.fi

Tapiola Action Plan for an Accessible Bus Terminal

AIMING AT AN ACCESSIBLE PUBLIC TRANSPORT TERMINAL

Tapiola Action Plan for an accessible bus terminal was part of the terminal construction planning process. The planning was carried out in 2006. The aim of the project was to examine the suitability of accessible solutions produced in the Elsa programme for the new Tapiola bus terminal. Another aim was to estimate ways to utilize the solutions in the construction planning stage. All Elsa projects that were considered beneficial for the accessibility of the new Tapiola bus terminal were examined.

During the first stage of the project, results of previous Elsa projects were surveyed for solutions and ideas promoting accessible public transport environments. Other ideas (such as those produced by the SuRaKu project and those included in the Finnish Public Transport Association infracards) were also charted. During the second phase, the feasibility of accessibility-promoting ideas and measures with regard to the planning of the Tapiola terminal was evaluated and the proposals for measures were selected. Ways to utilize the results of Elsa projects wider in the construction planning of similar targets were also considered.

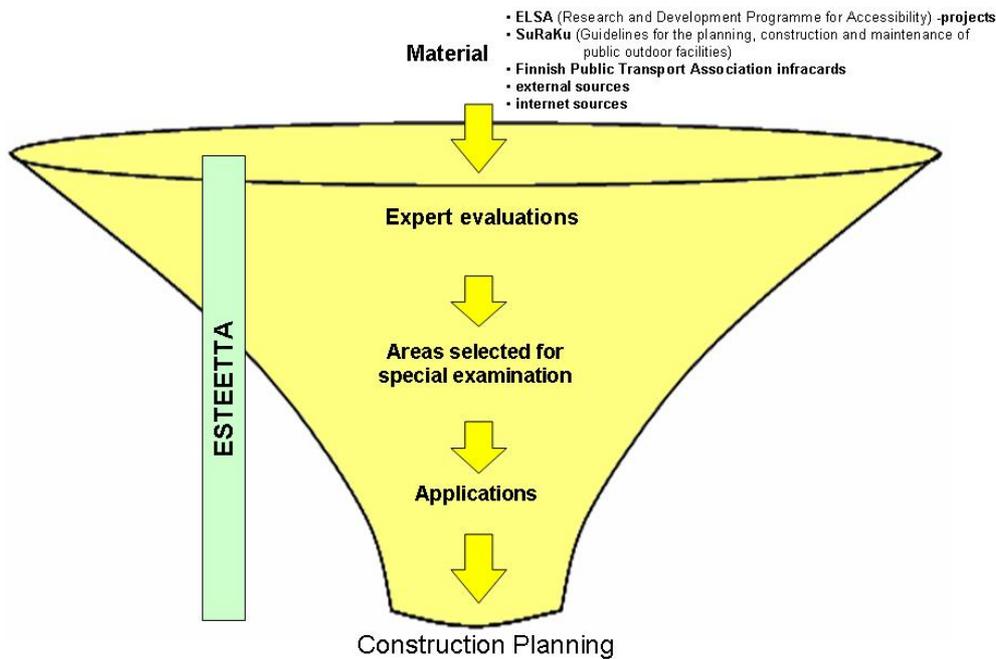


Illustration of project stages

ACCESSIBILITY IMPROVEMENTS THROUGH SMALL MEASURES

Implementation of the following accessibility-promoting measures was suggested for the construction planning stage of the Tapiola bus terminal:

- Lighting is planned observing the principles of accessibility. When the entire lighting system is renewed, challenges to accessibility can be faced. The lighting hierarchy contributes to the functionality of the terminal.
- Places where buses stop are indicated with embedded LED lights. This reduces uncertainty concerning these places and promotes thus the functionality of the terminal.



Illustration of the pedestrian route lighting of the Tapiola bus terminal. Image: Cadence, 2006)

IDEAS NEED TO BE TRANSLATED INTO PRACTICE

The measures proposed in the project were examined primarily with regard to the construction planning of the new Tapiola bus terminal, but they can be applied also to the construction planning of other similar targets. Lighting solutions and small, easily implementable measures are significant factors in promoting the accessibility of public transport terminals.

The project was a part of the Elsa programme and it was financed by the City of Espoo and the Ministry of Transport and Communications.

MORE INFORMATION

Electronic version of the report is available in Finnish at www.elsa.fi

Moderator**Irja Vesanen-Nikitin**Ministry of Transport and
Communications

tel. +358 09 1602 85 44

firstname.lastname@mintc.fi**Project Manager****Kaisa Kauhanen**

Ramboll Finland Oy

tel. +358 020 755 6282

firstname.lastname@ramboll.fi

Pasila Terminal Accessibility Survey and Implementation Programme

ACCESSIBILITY OF PASILA TRAIN TERMINAL EXAMINED THROUGH A USER STUDY

The project surveyed the Pasila train terminal in Helsinki for accessibility. Also the aural environment, colour contrasts and guiding materials were examined.

The target group consisted of elderly people, people with visual impairments, people with hearing impairments and people with otherwise reduced mobility whose independent public transport use can be promoted by creating an accessible transport environment.

The accessibility was surveyed through a user study and expert field investigation. Lighting and daylight conditions were charted also by means of computer modelling.

The project focused particularly on mobility impediments that were identified in the project "Accessible lighting and colour contrasts in public transport terminals and related environments". The most significant problem areas were difficulties in visual orientation due to strong shadows in daylight conditions, poor lighting of staircases and service and maintenance problems caused by the division of administrative responsibilities.



RECOMMENDED ACTIONS GUIDE THE PLANNING TIMETABLE

Results of the accessibility survey were utilised in the concurrent repair work of the terminal. Planning methods produced by the lighting and contrast study of the Elsa project "Accessible lighting and colour contrasts in public transport terminals and related environments" were utilised when the recommendations for actions were made. The project produced an implementation programme regarding the planned Pasila train terminal facilities, lighting and guidance.

FINANCIERS

The project was part of the Research and Development Programme for Accessibility (ELSA). The project was financed by the Ministry of Transport and Communications, the VR Corporation, the Finnish Rail Administration, the City of Helsinki Public Works Department and Helsinki City Transport.



MORE INFORMATION:

Ratahallintokeskuksen julkaisu A 12/2006.

ISBN 952-445-173-5 (nid.), ISBN 952-445-174-3 (pdf), ISSN 1455-2604
(Publications of the Finnish Rail Administration A 12/2006.

ISBN 952-445-173-5 (Vol.), ISBN 952-445-174-3 (PDF), ISSN 1455-2604.)

Electronic version of the report is available in Finnish at www.elsa.fi.

Accessible Public Transport in the Centre of Oulu

ACCESSIBILITY OF OULU PUBLIC TRANSPORT IS IMPROVING

The project investigated what kinds of effects the development measures for the street environment and public transport have had on the accessibility of public transport in the city of Oulu. To ensure that accessibility is observed in Oulu planning projects, planning practices and interest group co-operation were also surveyed.

Improved street environments and public transport services promote accessible public transport. The Torikatu street redevelopment will be completed in 2007, after which the street will function as a public transport street. Accessible city transport that will be launched in autumn 2007 will allow spontaneous travel in the city centre. The city transport will operate between the Torikatu street and the railway station every 10 minutes, promoting thus also travel chains that consist partly of long-distance transport and local transport.



The stops on the public transport street will be enlarged and the non-motorised traffic will be guided to pass the stops from behind. Visually impaired passengers will be able to better find the stop areas. Nevertheless, as the number of stops is cut and the size of stop shelters reduced, there is a possibility that stops get over-crowded. The real time information system that will be introduced on the most important local transport stops facilitates timely transfer to the stops and makes it easier to keep track of journeys.

After the public transport interchange is finished, the accessibility impediments will be eliminated from long-distance terminals. At present, the terminal environs contain several accessibility impediments that could be easily repaired even before the interchange is constructed.

AUDITS OF PLANS AND USER TESTS

The project was implemented by means of an audit procedure for the public transport service development plans and public transport information. The most recent accessibility guidelines were used as comparison material. In addition, to assess the changes in the accessibility level during implementation of plans, field investigations were carried out. City officials responsible for the city planning and maintenance, as well as service transport drivers and the local transport operator were interviewed.

The project proposed measures for redressing the detected accessibility impediments either immediately, in the implementation stage or during further development.

THE PROJECT AS A PRELIMINARY STUDY FOR CREATING THE OULU ACCESSIBILITY STRATEGY

The City of Oulu has neither a particular accessibility policy for city planning nor separate guidelines for accessible maintenance. Because Oulu is preparing an accessibility strategy, the project results can be used as a preliminary strategic survey for public transport. During the project, ways to develop the co-operation of accessibility interest groups with regard to city planning and road and street maintenance were also defined. The most significant problem with accessible maintenance is that contractors have insufficient knowledge on the need for accessibility.

The project was financed by the Ministry of Transport and Communications and the City of Oulu. The project steering group included representatives of the City of Oulu, the State Provincial Office of Oulu, the Finnish Road Administration as well as representatives of the City of Oulu Council on Disability and its consultancy.



MORE INFORMATION

Electronic version of the report is available in Finnish at www.elsa.fi.

Transport Engineer
Jaakko Ylinampa
 City of Oulu
 tel. +358 08 558 42122
firstname.lastname@ouka.fi

Project Manager
Minna Soininen
 Liidea Ltd.
 tel. +358 08 8810 316
firstname.lastname@liidea.fi

User Tests of Accessible Bus Stops and Education Plan for the Drivers of Accessible Bus Routes

NEW DIMENSIONING GUIDELINES FOR BUS STOPS TESTED BY DRIVERS AND PASSENGERS

In the project, a pair of new accessible bus stops and their environs along the route of Espoo public transport line 19 in Puolarmetsä were tested in practice. This pair of accessible stops was planned by the previous Elsa project "Accessible public transport line 19 in Espoo". The functionality of the dimensioning and planning solutions was tested with regard to driving to the stop, the functionality of equipment used, and also with regard to the mobility of drivers and different passenger groups. The construction work was confirmed by measuring and observing. The functionality of the stop for drivers and passengers was tested by organising three separate test rounds: during the first round, the driver drove an empty vehicle on the stop; on the second time a test group travelled on the bus and on the last time the same test group used the stop as in any normal scheduled traffic.



The tests and confirmatory measuring indicated that the model for accessibility stops is suitable for passengers in need of high-level accessibility and is well-designed also with regard to its approachability by bus. The contracting, construction, as well as work supervision and approval are aspects worth special attention and accuracy. More detailed requirements for construction should be recorded in the contract plan. Planning of accessible stop environs needs to be extended beyond the front

side of stops, and more attention is to be paid to the planning of accessible stop shelters.

DRIVER TRAINING INTEGRATED INTO THE QUALITY REQUIREMENTS

Driving habits and other behaviour of drivers are significant for the implementation of accessibility. Even the most exquisite technical fittings are of no use if drivers cannot use them or do not have the required patience. Investments in driver training should thus be made and refresher courses should be regularly attended. The driver training should also be integrated into the quality requirements of the competitive tendering criteria. Moreover, transport operations and schedules are to be planned so that accessibility requirements can be met.

Maintenance is central to the implementation of accessibility. Winter maintenance of an accessible public transport system is thus worth special attention.

NEW STOPS SUITABLE ACROSS THE COUNTRY

When accessible bus transport is pursued, the model stop can be implemented on a wider scale in Espoo as well as in other parts of Finland. The education program for driver training, i.e. the themes, can be included in the competitive tendering criteria for public transport in all parts of Finland.



The project was financed by the Ministry of Transport and Communications and the City of Espoo. The project was steered by a working group that included members of the City of Espoo units for Master

Planning, Traffic Planning and Street Planning, representatives of the YTV Helsinki Metropolitan Area Council and members of the City of Espoo Councils of the Elderly and the Disabled.

MORE INFORMATION

Raportti: TESTELI Esteettömien bussipysäkkien testaus ja kuljettajakoulutuksen kehittäminen, Espoon kaupungin tekninen keskus 2006.

(Report: User tests of accessible bus stops and education plan for the drivers, City of Espoo, Technical and Environment Services. 2006.)

Electronic version of the report is available in Finnish at www.elsa.fi.

Evaluation of Client Information Profiles and Databases of Travel Dispatch Centres in Finland

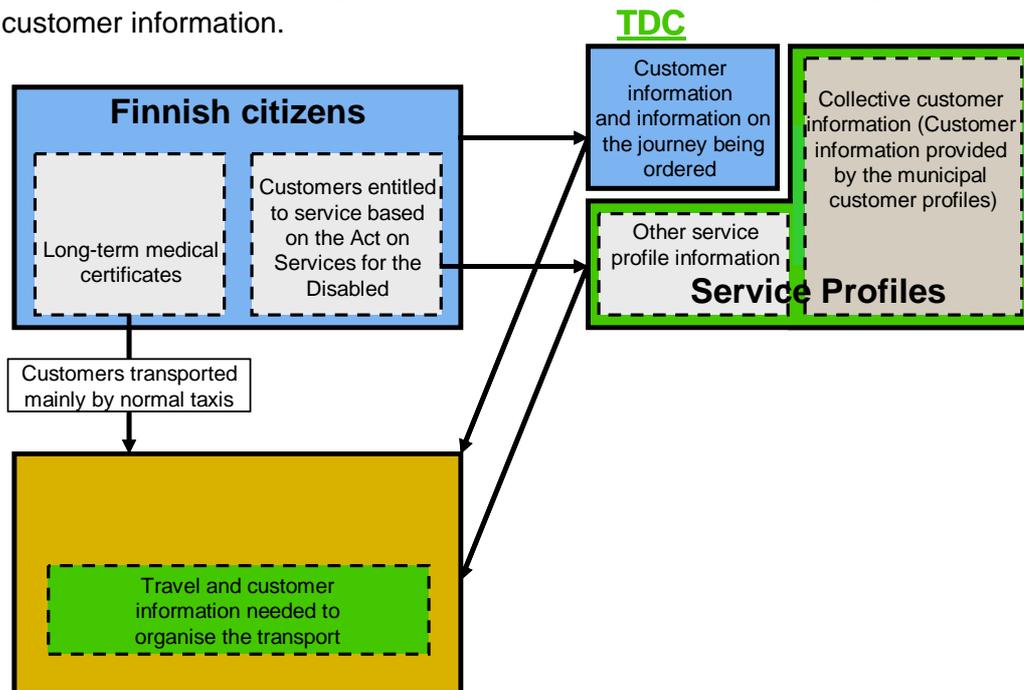
SAFE AND HIGH-LEVEL TRANSPORT SERVICES REQUIRE FAMILIARITY WITH CUSTOMERS' TRANSPORTATION NEEDS

The project examined the handling of personal information during the establishment and operation of a travel dispatch centre (TDC). Liabilities and rights relating to the registration of personal information were surveyed, and open questions concerning the registration system planning were documented. The importance of customers and data protection was emphasised.

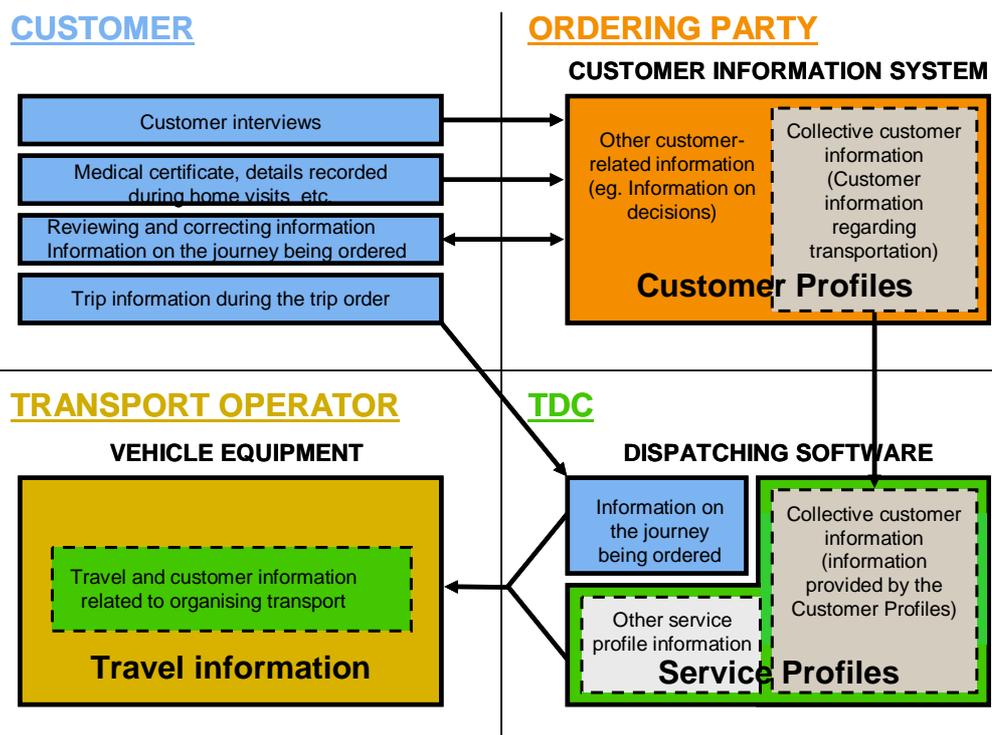
The project produced a national proposal for a customer and service profile model for clients in need of special transport. The models facilitate the development of new travel dispatch centre districts, contribute to the improvement of existing ones and help to harmonise operations. To create the customer profiles, a model form for customer interviews was created and instructions for conducting the interviews provided.

Another aim was to standardise the travel dispatching terminology. The project investigated, which information on customers' special characteristics and needs should be recorded in the information system. In addition, the ordering transaction for customer-transport and the enquiry of necessary personal and travel information were charted.

Correct and up-to-date customer information is a precondition for a safe and functional TDC travel chain. The project proposed thus a system for correcting and updating customer information.



TRANSPORT OPERATOR



LEGISLATION AND CUSTOMER-ORIENTEDNESS ARE CENTRAL

The project examined the client information profiles and service profiles as well as the customer interviews conducted in connection with the construction of the travel dispatch centres of Espoo, Helsinki, Joensuu, North-Karelia, Rovaniemi region and of Tampere. The investigation was carried out by means of telephone and e-mail interviews. Also the customer information handling practices of the Social Insurance Institution of Finland Kela and the hospital districts were studied.

The relevant legislation concerning the handling of personal information and the statements made by the Data Protection Ombudsman were used as background material.

The work was commissioned by the Ministry of Transport and Communications as part of the Research and Development Programme for Accessibility (ELSA). Represented in the project group were the Ministry of Transport and Communications, the City of Espoo, the City of Espoo Council for the Elderly, the City of Helsinki Officer for Handicap Affairs, the Social Insurance Institution of Finland Kela, the North-Karelia Travel Dispatch Centre and the Finnish Association of People with Mobility Disabilities.

MORE INFORMATION

Publications of the Ministry of Transport and Communications 43/2005
www.elsa.fi

Development of an Accessible Future Coach

Accessible long-distance bus transport is an area in need of major development. The implementation of accessible public transport services requires that not only the public sector but also the transport operators and other actors involved in producing transport services develop their services to suit the needs of all passenger groups.

The starting point was, through design, to identify accessibility-promoting solutions that bus transport operators can utilise in their everyday work. The project produced a definition for a future coach.

The solutions observe especially the needs of the ageing, for they constitute a significantly expanding group of long-distance transport users. Special needs of the ageing relate widely to various aspects of accessibility and serve thus also the needs of other passengers.

The future coach meets better the needs of passengers with weak legs and lacking strength, people of small stature, passengers with visual and hearing impairments, people with perceptual difficulties and passengers travelling with luggage. However, a long-distance journey is completely accessible only after passengers using a wheelchair or a walker can be guaranteed an accessible long-distance door-to-door journey.

PASSENGER VIEWPOINTS EMPHASISED IN TARGETS FOR DEVELOPMENT

The project surveyed approximately 20 parts in a long-distance bus, focusing on sections whose accessibility for passengers can best be promoted in a commercially profitable manner. Because the market accepts new ideas progressively, the development of an accessible coach needs to be carried out in various stages as well.

WORKING GROUP RECOMMENDS TARGETS FOR DEVELOPMENT

According to the working group, immediately implementable solutions include staggered floors, contrast colouring, improved interior lighting, improved upholstering materials, alternative seating arrangements and ergonomic toilets.



Other targets for development and implementation include swivel seats, lifting stairs, improved aisle width and location of the control console, storage compartments and information provided during the journey. The development of these requires initiation from the private sector and needs to be funded for example by the Finnish Funding Agency for Technology and Innovation TEKES.

At this stage, the development of a completely low-floor bus front section was deemed a target for later development.

CONCRETE IMPROVEMENTS SOUGHT THROUGH DESIGN

The project continued the efforts of the Ministry of Transport and Communications to develop the long-distance bus transport and accessible bus stock. Concrete solutions that are both accessibility-promoting and commercially profitable were sought through design. The ideas were created co-operatively by a transport operator and a bus manufacturer. The targets for development were evaluated and selected based on their accessibility, technical feasibility and economic profitability. Representatives of the Central Union for the Welfare of the Aged and the Finnish Association of the Deaf, visually impaired users and members of the Threshold Association were all consulted.

APPLICABILITY OF THE PROJECT

The project offered bus manufacturers a chance to gain cost-effective ideas that would further improve the stock. Before the manufacturing can be started, transport operators need to agree on the feasibility of the proposed solutions. The project promoted the objective to improve the accessibility of the stock.

IMPLEMENTERS

The project implementers included Oy Pohjolan Henkilöliikenne Ab, Lahden Autokori Oy and WSP LT Consultants Ltd.

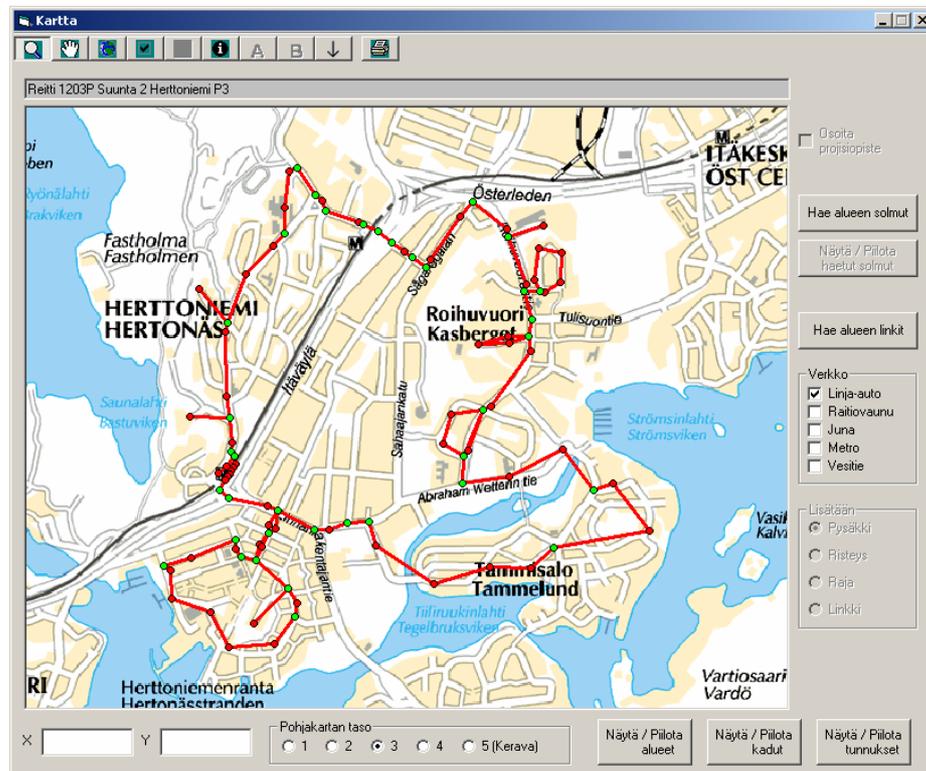
MORE INFORMATION

Chief Inspector
Irja Vesänen-Nikitin
Ministry of Transport and
Communications
tel. +358 09 160 02
firstname.lastname@mintc.fi

Industrial Designer
Mari Siikonen
WSP LT Consultants Ltd.
tel. +358 09 615 811
firstname.lastname@wspgroup.fi

SERVICE ROUTE DESCRIPTIONS PRODUCED

The route descriptions include a list of road and street links used by each service route. Depending of the departure time, the routes vary slightly.



A description to the Herttoniemi service route (P3) was created.

Some of the service routes include parts deviating from the standard route that are operated as public transport only on demand. Demand responsive parts were marked in the description with a special code. If the offered route contains a part operated only on demand, the passenger has to be informed of this and preferably be also provided with a phone number that is used to request demand responsive transport. To ensure that the route planner offers appropriate vehicles to persons with reduced mobility, the system should allow that both service routes and low-floor equipment are entered as search criteria.

In May 2006, service route information was transferred into the YTV Helsinki Metropolitan Area Council route and line planner and the service portal matka.fi.

MORE INFORMATION:

Irja Vesanen-Nikitin
Ministry of Transport and
Communications
Tel. +358 09 160 28544
firstname.lastname@mintc.fi

Mervi Vatanen
Helsinki City Transport
Tel. +358 09 472 2310
firstname.lastname@hkl.hel.fi

Petri Blomqvist
Matrex Oy
Tel. +358 40 516 8812
firstname.lastname@matrex.fi

Action Plan for Accessible Passenger Information

ACTION PLAN FOR PUBLIC TRANSPORT INFORMATION PLANNING AND IMPLEMENTATION

The project produced an action plan for Helsinki City Transport for planning and implementing accessible public transport information. Upon implementation of the action plan, all passenger groups are constantly taken into consideration and this becomes an automatic and natural part of any passenger information planning, development or updating process. To achieve this objective state, two recommendations were made and means and tools for their implementation were proposed.

1. User surveys are integrated into the standard passenger information implementation and production processes of Helsinki City Transport.
2. The accessibility of passenger information is systematically documented and maintained. To facilitate this, a model chart (so called checklist) allowing commensurate and illustrative information was created. Accessibility information can be documented through expert evaluations, but the most reliable information is acquired through user surveys.



EVALUATION OF PASSENGER INFORMATION AS PART OF STANDARD PLANNING PRACTICES

The action plan was formulated by acquiring comparison material on equivalent methods and practices and their positive and negative sides. The comparison of Helsinki City Transport's own processes and other methods allowed the action plan and related tools to be created on the grounds of the corporate quality system. It was thus possible to integrate them as smoothly as possible into the existing planning and production processes. The functionality of the action plan was tested and clarified by executing the service route information testing as an expert evaluation.

The evaluation tool can be created for example as an Excel-based tool that runs in the Helsinki City Transport intranet and functions also as an updatable database. A properly functioning table brings added value by making it easy to form overall pictures which can be utilised for example when prioritising developmental measures. For example many red markings symbolise an acute need for improvement. When the chart is filled in, accessibility is charted from the perspective of various passengers. This launches a learning process that facilitates the understanding of one's own operating environment within an organisation.

APPLICABLE TOOL

Apart from the topic of this project (passenger information), the produced tool can be used also for other purposes, such as user-oriented development of transport stock or stop environments. After minor adaptations, the tool can be used by other cities as well.



The project was financed by the Ministry of Transport and Communications and Helsinki City Transport.

MORE INFORMATION

Helsingin kaupungin liikennelaitoksen julkaisusarja D 11/2006;
Matkustajainformaation käytettävyyden toimenpideohjelma.
(Helsinki City Transport Publication Series D 11/2006: Action Plan for Accessible Passenger Information.)

Electronic version of the report is available in Finnish at: www.elsa.fi

Survey and Action Plan for Accessible Water Transport

Project description

The project consists of a survey for the current state of accessible water transport and the action plan aiming to implement both the Accessibility Strategy of the Ministry of Transport and Communications and the Directive 2003/24/EC. Whereas the accessibility strategy covers water transport in its entirety, the Directive relates to domestic marine passenger traffic. In addition to the physical accessibility of vessels, aspects covered in the project include the availability of information, safety of passengers with reduced mobility and the need to improve the professional skills of personnel.



Contents of the project

The survey for the current state gathers together the requirements provided in the Directive for domestic passenger traffic and identifies any aspects not yet compliant with it. As to other modes of water transport, the survey collects practices and problems relating to the current accessibility state and the safety of persons with reduced mobility. Also the accessibility-promotion plans of ship-owners are surveyed and the amount of current staff training charted.

The action plan examines various types of measures and influence methods for solving problems encountered by persons with reduced mobility. Whereas some of the problems can be solved by developing methods and practices, others by improving equipment and aids, some require structural solutions that are more expensive and need a longer implementation period. For the action plan, as realistic and concrete recommendations as possible were made. In addition, a timetable and the parties liable were defined and an estimate for the alternative financing methods for the measures required by the Directive and the accessibility strategy were put together. The action plan contains recommendations also on developing the professional skills of personnel with regard to attending to the needs of special passenger groups.

Timetable

The project was launched in September 2006 and will be completed in February 2007.

Contact information

Ministry of Transport and Communications, Moderator Irja Vesänen-Nikitin, tel. +358 09 1602 8544, firstname.lastname@mintc.fi

Linea Consultants Ltd., Project Manager Annamari Ruonakoski, tel. +358 09 720 64268, firstname.lastname@linea.fi

Accessible Transport Environment in the City of Hyvinkää

The work was part of the project "24 safe hours in Hyvinkää", and it continued the accessibility-promotion work of Hyvinkää. The objective of the city is that accessible routes and public transportation function and develop together seamlessly.

The project examined problems relating to accessible maintenance and travel chains and surveyed also the barriers on streets and in park areas in the Hyvinkää centre and around the Asemankatu street. Based on the results, measures promoting accessible maintenance, structural improvements and travel chains were defined. The measures were prioritised in the implementation programme. Follow-up measures and measures for further promotion of accessibility were also defined. Used data was collected both by organising a city centre walking trip for interest groups and by means of an assisted GIS-survey.

ACCESSIBILITY INFORMATION THROUGH AN ASSISTED GIS-SURVEY

The project developed a user-oriented web-based GIS method for collecting information on barriers and impediments. The GIS-survey was divided into three parts:

- barriers in the built environment
- impediments relating to (winter) maintenance
- barriers and impediments relating to travel chains.

Students of the Laurea Polytechnic carried the interviews out by using laptop computers. The acquired data was input directly into a web-based survey and map template. For example the route used on the previous day and problems encountered along the route and within the travel chain were marked on the map. The City of Hyvinkää Council for the Disabled and the Council for the Elderly filled the survey on the internet.

The assisted survey served the purpose of the project well. It is suitable for examining the needs of a user group living or functioning in a specified location, such as a sheltered home.

IMPLEMENTATION MODEL FOR PROMOTING ACCESSIBILITY

The accessibility measures taken within the city centre can be divided into four types:

- comprehensive development projects
 - separate development projects
 - individual improvements
 - maintenance procedures.
-

February 2006

Apart from accessibility, the select areas have other development needs as well. In these areas, accessibility promotion is integrated into other developmental activities. Equipping steep ramps and staircases with handrails and increasing the number of benches that have arm and backrests were developed into separate development projects that will receive respective budget allocations. Measures relating to maintenance are relatively minor and will thus be implemented as part of standard maintenance work.



The project was steered and commented on by a steering group that included persons elected to positions of trust, experts of the city, of the consultancy and of the Ministry and representatives of the Laurea Polytechnic.

The project was financed by the Research and Development Programme Elsa of the Ministry of Transport and Communications and the City of Hyvinkää.

MORE INFORMATION:

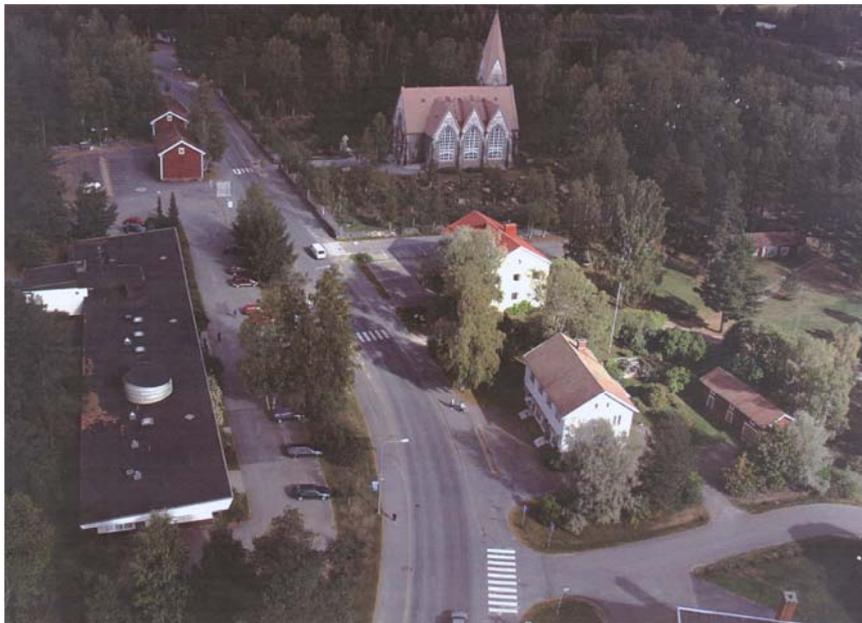
Electronic version (PDF) is available in Finnish at: <http://www.elsa.fi>

Accessibility in Construction Planning – Surveying the Road Design and Construction Plan of Alahärmä Municipality

ROAD DESIGN, CONSTRUCTION PLAN AND ACCESSIBILITY SURVEY COMBINED

The project surveyed accessibility during the construction planning of Alahärmä main road. The project focused on the accessibility of three properties, the market square and its environs and the Kanttorintie street. The aim was to get the municipality of Alahärmä and the owners of the most salient commercial properties interested in improving the non-motorised traffic environment in connection with the main road basic renovation.

The basic renovation of Härmäntie road was brought forward by one year to a time, when the construction planning of Härmäntie under the Elsa project was already at an advanced stage. The accessibility survey caught property owners by surprise, leaving them unprepared to follow the original plan to improve their yards and other such areas in connection with the road renovation.



As a result, property owners improved their yard areas through lighter measures that were adapted from the general plans. Implementation of solutions conformable to the original plans is uncertain. The municipality can utilise the acquired information and given feedback in its own projects, in the development of the market square and related environs and in improving the Kanttorintie street. In this respect, the dialogue between participatory interest groups can also be put to use.

City of Järvenpää, Accessibility Action Plan and Public Transport Development Plan



The project produced an accessibility action plan for the public areas and most salient public buildings in the centre of Järvenpää. In addition, a public transport development plan was made. The development plan focused on the railway station and rail transport flag stops as well as the Matkahuolto service point and city centre bus stops.

The 2004 implemented accessibility survey and walking tour taken by a user team functioned as starting points. During the walking tour, several accessibility impairments were listed. In addition, the user team expressed its wishes on ways to improve accessibility.

ACTION PLAN SUGGESTED IMPROVEMENTS TO PUBLIC AREAS AND BUILDINGS

Altogether 358 measures for improving public areas were proposed. Most of the suggestions are small, easily implementable measures. The numerical majority of improvements were requested with regard to surface materials and inclinations. A large number of suggestions concerning guiding and kerb elements were also made.

A total of 233 improvements to public buildings were suggested. Approximately half of these measures focus on entrances. A multitude of measures was also proposed with regard to the spaces between the two sets of outer doors, service points and guidance.

PRIORITISATION OF MEASURES

The measures can be prioritised based on the route maintenance class, the importance of the route or building, classification by costs or the severity of the shortcoming. The city of Järvenpää decided to prioritise the measures by the **importance of the route or building** and **costs**. The prioritisation was further defined by using the accessibility criteria (basic level /special level). Severe shortcomings and easily implementable measures were placed at the top of the list. Järvenpää integrated the measures into the future street construction projects.

PUBLIC TRANSPORT DEVELOPMENT PLAN

The measures of the development plan focused on the following:

- Improving the guidance and signs (several stations)
- Improving the railway station elevators
- Developing accessible and stair-free routes
- Observing the accessibility criteria for bus stops
- Constructing/improving the non-motorised traffic routes to stops
- Improving the surface materials of stations and stops and related environs.

For bus stops, requirements for basic level and special level accessibility were set.

IMPLEMENTATION AND FURTHER DEVELOPMENT

Responsibility for the implementation of measures for public areas and buildings administrated by the city rests on the City of Järvenpää Technical Department. Measures for buildings owned by other actors are attended to by the property owners and the results of the survey will be distributed to property owners. Implementation responsibility for public transport measures rests on VR and/or The Finnish Rail Administration with regard to rail transport stops, on Matkahuolto with regard to bus station interiors and on the City of Järvenpää with regard to bus stops, outdoor areas of bus stations and also with regard to measures for the nearby surroundings of rail transport stops.

Monitoring of proposed measures and recommendations is a significant part of the follow-up process. The steering group convened within the framework of planning of measures should thus meet at least once a year for evaluating implemented measures. Furthermore, it is proposed that the Technical Departments of the municipalities of Keski-Uusimaa co-operate in promoting accessibility.

MORE INFORMATION

Electronic version (PDF) of the final report is available in Finnish at:

<http://www.elsa.fi>

Accessibility Surveys and Implementation Programmes in the Small Localities of the City of Kiuruvesi and the Municipality of Sonkajärvi

The project was initiated by the city of Kiuruvesi and the municipality of Sonkajärvi. As proposed by the Ministry of Transport and Communications, the municipalities combined their separate Elsa projects into a single unity already when applications were called for. The primary objective was, in a process-like manner, to develop travel chains accessible all the way from ordering the journey to returning home. In this way, the entire journey "runs on wheels".

The development of service transport covers improvements to the functionality and accessibility. The project focuses on the routes in the localities of these municipalities that are used particularly by elderly people and special user groups. The project surveyed the localities of the city of Kiuruvesi and the Sonkajärvi municipality for accessibility and produced respective accessibility plans and implementation programmes. The localities are Kiuruvesi, Sonkajärvi and Sukeva.



PROJECT STEERED BY SURAKU-CARDS

The accessibility surveys examined the localities with regard to non-motorised traffic routes, crosswalks, rest-areas, public transport stops and lighting. The entrances, yards areas and parking places of service buildings that are located on the routes were surveyed. The examination criteria used were largely based on the results of the national SuRaKu project. In addition to the built environment, the quality requirements for maintenance were investigated and the accessibility of service transport charted.

GOOD ACCESSIBILITY SITUATION TO BUILD ON

Based on the project, it is possible to conclude that the select localities do not have major accessibility impediments. All surveyed localities are located more or less on the flat, where differences in elevation are minor. Different modes of transport are already well separated. The services are located within a small area, thus reducing the need for transport. These three starting points offer good opportunities for promoting accessibility. The current accessibility situation of service transport is good as well, for accessibility has been taken into consideration already in the purchasing process.

Individual projects are proposed for improving the built environment. The responsibility for projects for public areas rests either on municipalities or the Finnish Road Administration. The responsibility for property measures rests either on municipalities, communities or companies. It was proposed that municipal measures be financed from the allocation for road safety measures.



To continuously promote accessibility and to involve all administrative sectors in accessibility work, municipalities need to create relevant accessibility plans. It was proposed that municipal accessibility co-ordination be included in the tasks of the road safety contact person. With regard to properties, the municipal supervision of building has a special responsibility to bear.

The survey was financed by the Elsa programme, the City of Kiuruvesi and the municipality of Sonkajärvi.

MORE INFORMATION

Electronic version of the report is available in Finnish at www.elsa.fi

Promoting Accessibility in the City of Kotka

The project surveyed the Kotka public transport arrangements for accessibility with a special emphasis on the development possibilities of accessible service transport. In addition to this, Kotka city transport and leisure sites observing accessibility were described. The project was implemented alongside the 2003 launched project "Accessible Kotka", which has charted the shortcomings of public services.



MOST SIGNIFICANT DEVELOPMENTAL MEASURES IDENTIFIED

- The service route stop at Karhula market square will be improved: The stop will be moved to a more appropriate location, the waiting area will be raised and appropriate stop signs, schedule information as well as a seat will be provided.
- The stop in front of the Karhula bus station will be asphalted. A new parking place for the disabled will be built at the western end of the market square.
- Needs tests for the new Munsaari, Ristinkallio, Kaarniemi and Ristiniemi service routes will be carried out.
- Informing of service transport will be made more effective.

In summer 2004, within the framework of the "Accessible Kotka" project, three junctions of the Kotkankatu street in the centre of Kotka were made accessible. The work was continued in autumn 2005, when the junction of Kotkankatu and Kymenlaaksonkatu next to the bus station was made accessible. Kotkankatu is thus becoming an accessible route. High, short and incorrectly situated bevels as well as traffic signs located on the pedestrian route were eliminated from the junctions. The aim is to continue the work by improving one junction each year.

EXPERT INTERVIEWS AND FIELD VISITS

Most of the information was acquired through expert interviews. The project interviewed service transport operators, drivers and passengers. Interviewed personnel of the City of Kotka included a traffic engineer, a passenger transport planner, a person in charge of accessibility issues and representatives of the agency for services for the disabled.

The steering group and members of the City of Kotka Council for the Elderly and the Disabled made field visits to the Karhula market square and leisure sites.



AWARENESS OF ACCESSIBILITY ISSUES INCREASED

The City of Kotka implementation programmes were complemented with concrete accessibility-promoting measures. The "Accessible Kotka" project summary was attached to the project report. The City of Kotka can utilise the summary in its information strategies. Together with the project Accessible Kotka, this project has raised the awareness of the city administration of accessibility issues. This is likely to promote accessibility in the future as well.

The steering group consisted of representatives of the City of Kotka, the State Provincial Office of Southern Finland and of the consultancy.

The project was financed within the framework of the Elsa programme by the City of Kotka and the Ministry of Transport and Communications.

MORE INFORMATION

Electronic report of the project is available in Finnish at www.elsa.fi

City of Forssa, City Centre Accessibility Survey and Public Transport Accessibility Charting

FORSSA CITY CENTRE SURVEYED FOR ACCESSIBILITY

The project surveyed the physical accessibility impediments in the transport environment of the city centre of Forssa. The entrances to the most important public buildings and the bus stops of the Forssa local transport "Paikkuri" were examined and the accessibility of the bus station and related environs was charted. In addition to this, accessibility-promoting and accessibility-obstructing operation methods of various administrative sectors were identified and the co-operation between different interest groups was studied.

The 2005 conducted road safety and accessibility survey for walking and cycling and the accessibility enquiry carried out in the beginning of the project were used as starting points. In addition, the steering group members made a walking tour together with persons with reduced mobility and function.



IMPROVEMENTS

Most of the measures for the physical environment are small, easily implementable improvements. The improvements to pedestrian crossing points focused on the height of kerb elements and paid attention also to the visibility and guiding properties of crosswalks. The improvements to sidewalks concentrated on removing uneven surfaces and fitted barriers, such as posts and poles.

No major accessibility impediments in Forssa public transport were found. The most significant shortcomings relate to the accessibility of bus stops. Most of the suggested improvements aimed at enhancing the visibility from the stops and improving the accessibility of waiting areas and routes to the stops.

To make the co-operation of various administrative sectors and the Council for the Elderly and the Disabled more effective in Forssa, measures targeted especially at improving communication were proposed. It was also suggested that the City of Forssa set up a working group for road safety whose task is to raise the decision-makers' and citizens' awareness of accessibility and to also monitor the implementation of accessibility-promoting measures.

IMPLEMENTATION PROGRAMME

Measures aimed at improving the surveyed targets were outlined. In addition, a cost-estimate for each target was made and project implementers defined. Based on their urgency, the projects were placed into three categories. The urgency was defined by the importance of the route or building, the severity of the shortcoming and the implementation costs. In addition, the accessibility measures for crosswalks and non-motorised traffic routes were defined observing the basic renovation of the Kartanonkatu street. Further planning and development of Kartanonkatu is implemented by the City of Forssa in the near future.

The local transport bus stops were categorized into basic level and special level stops. From among those of special level, stops for the Paikkuri transport services for the elderly and the disabled were selected.

The City of Forssa will implement the physical measures gradually as part of its own work. In the future, proposed measures, such as the model solution for a crosswalk, can be applied to all new building construction and renovation projects.

The project was financed by the City of Forssa and the Ministry of Transport and Communications.



MORE INFORMATION

Electronic version of the report is available in Finnish at www.elsa.fi.

Accessible Winter Maintenance

OBJECTIVE QUALITY OF WINTER MAINTENANCE THAT MEETS THE NEEDS OF ALL USER GROUPS

The project surveyed the integration of accessibility into the planning, implementation and monitoring of winter maintenance. What quality level meets the requirements provided by the Act on the maintenance and cleaning of streets? What level of quality do we want to offer to pedestrians? The definition for the objective quality should include answers to these questions.

Identifying the most important pedestrian routes requires examining the walking and cycling route networks as separate entities. The survey presents a view on how to observe accessibility and the needs of pedestrians in winter maintenance. It is essential to ensure that the objective quality of winter maintenance meets the needs of all user groups. Under the revised Act on maintenance and cleaning of streets, municipalities are also to clarify the areas whose sidewalks they will maintain and to define how often this is done.

To better observe accessibility, the project proposed specifications to the pedestrian route maintenance classification and related quality requirements. Other examined topics include winter maintenance piecework contracts, related interaction and informing.



The results can be utilised in

- defining the maintenance level according to the legislative requirements
- the pedestrian route maintenance classification
- the development of monitoring methods for and informing of winter maintenance
- the purchasing practices for winter maintenance
- the development of training for winter maintenance operators.

The project was financed by the Ministry of Transport and Communications, the Finnish Association of Local and Regional Authorities and the cities of Jyväskylä and Tampere.



MORE INFORMATION

Finnish Association of Local and Regional Authorities 2005. Esteettömyys talvihoidossa ISBN 952-213-048-6 (Accessible Winter Maintenance)

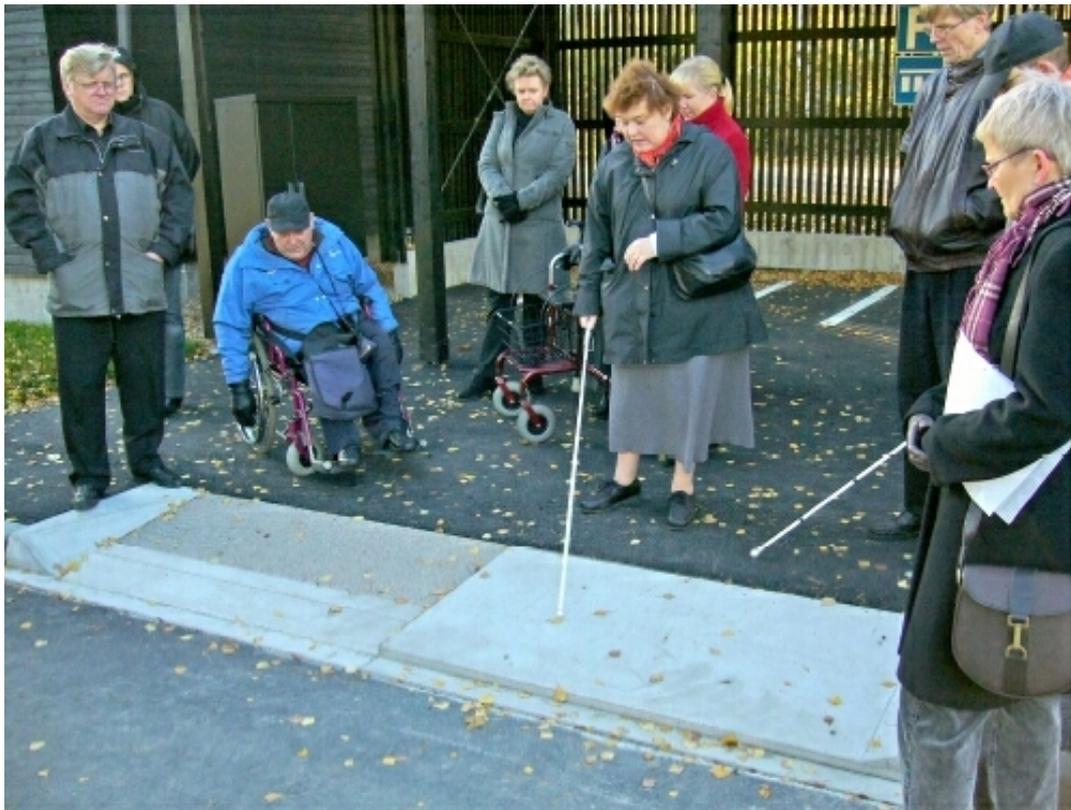
Electronic version (PDF) is available in Finnish at: <http://www.elsa.fi>

Development Project for Accessible Environmental Products

NEW PRODUCTS COMPLIANT WITH THE SURAKU-CRITERIA ON THEIR WAY TO THE MARKET

The aim of the project was to develop the products and product systems for environmental construction so that they conform to the guidelines specified within the recent years and enable the future construction of accessible outdoor facilities using standard products.

The project resulted in the development of the following product groups: crosswalk kerb stones made of stone or concrete, outdoor steps made of stone or concrete and guide plates for the visually impaired made of stone. The products were developed within the joint SuRaKu project of six cities. In co-operation with organisations for the disabled, the project defined requirements for accessible environmental structures.



PRODUCTS TESTED ON USERS IN REAL ENVIRONMENTS

The product development project is implemented in close co-operation of the participant manufacturers of environmental products, the cities and the various organisations for the disabled. During 2006, product prototypes were made. To ensure the functionality and durability of the products, the prototypes were tested in as authentic operational environments as possible. All product manufacturers concentrate on products suitable for their own productions and product families and supply the test sites with appropriate products. The cities provide expert advice, appoint the target sites and co-operate with the consultancy in arranging respective testings. During product testings, members of organisations for the disabled give their expert opinions. Product testings continue until the spring 2007, at which time the results of winter tests and the last test sites will also be available for analysis.

In addition to the test sites, a plan to build an exhibition area to the children's driving park in Helsinki was created. The exhibition area will be completed in May 2007 and will function as a venue for introducing and testing accessible products until 2011.

**FINANCIERS**

This development project was financed by the Ministry of Transport and Communications, the Ministry of the Environment and the Ministry of Social Affairs and Health. Product manufacturers and participant cities have contributed to the financing of the project by covering the costs of their own work. The participant cities are Helsinki, Tampere and Espoo. Environmental products manufacturers involved are Lemminkäinen Oy, Abetoni Oy, HB-betoniteollisuus Oy, Suomen Graniittikeskus Oy and Rakennusteollisuus RT ry.

MORE INFORMATION

The intermediate project report was released in the end of 2005. An electronic version is available in Finnish at www.elsa.fi. The final project report will be released upon completion of the project in summer 2007.

Improved Lighting as a Means for Accessible Mobility and Better Orientation and Safety

The project aimed to identify means for improving the seamlessness, orientation and safety of travelling. The work focused especially on public transport environments. The most significant ideas relate to using LED lights to guide drivers, cyclists and pedestrians and to improve the visibility of crosswalks by cross-lighting. Loudspeaker technology for silent bus stops and their announcements was also introduced.

Nine idea cards presenting different technical applications were produced. Whereas some of the applications can be implemented immediately and others require further development for some years, some are not technically possible for another 5–10 years. Three project cards of sites where the technology is ready to be implemented were also made. These sites are the Tapiola bus terminal, Ruoholahti metro station and Tikkurila bus terminal and their immediate environs. LED lighting solutions are proposed for each site.



Illustration of the crosswalk next to the Ruoholahti metro station.

ACCESSIBILITY BY USING LED LIGHTS

The project proposes installing LED lights to crosswalks by embedding them into the road surface. This would increase the visibility of pedestrians crossing the street. The proposed LED lights would protrude from the road surface only by approximately three millimetres. According to the manufacturer, the lights are durable enough for

winter maintenance. However, their light cannot penetrate heavy snow or ice. Similar lighting systems are used in Wattens, Austria.

The work was based on published data on the impacts of similar applications, accident statistics and expert interviews. Interviewed experts included for example product suppliers and driving instructors.



On the left is an illustration of a stop in the Tapiola bus terminal and the indicated place where buses stop. On the right is an illustration of a cross-lighted crosswalk at the Tikkurila bus station.

DEVELOPMENT OF APPLICATIONS IS PRODUCTIVE

Although proposals for applications have been examined primarily with regard to the development of the public transport environment, they are applicable elsewhere as well. LED lights have many potential applications in non-motorised traffic environments. They are particularly suitable for improving the visibility of pedestrian crossing points.

Different lighting solutions can improve the transport environment considerably. Nevertheless, the introduction of these systems always involves certain risks and their applicability to Finnish conditions is yet not completely certain. The aim is to test these systems in the capital area in the near future.

Even the best technologies cannot eliminate all dangerous elements of a transport environment, and technical systems do not diminish the responsibilities of road users. Careful and attentive passenger behaviour must therefore be encouraged.

The project was a part of the Elsa programme and it was financed by the Ministry of Transport and Communications.

MORE INFORMATION

Publications of the Ministry of Transport and Communications 39/2005.

Electronic version is available in Finnish at:

http://www.mintc.fi/oliver/upl565-3905_raportti.pdf

<http://www.elsa.fi>

Accessible Inland Water Transport and Tourist Services

The project surveyed the current accessibility state of the Lehtimäki and Ähtäri water transport with regard to harbour areas, tourist services and the most important operation environments of users with reduced mobility and function. Solutions that would promote independent mobility and improve the attainability of recreational services were also examined.

Measures promoting accessible water transport routes and harbour areas were recommended for the select sites. The survey focused on the attainability of services and the accessibility of outdoor environments and harbour sites. Transfer to vessels and on-board functioning and mobility are examined in more detail within the "Water transport and persons with reduced mobility" survey for vessels.

The project implemented generally approved, accessibility-promoting solutions that were adapted for the service level of small municipalities. Essential planning and dimensioning guidelines that will be applied in further development were included in the report.

COMPLEMENTARY USER EXPERIENCES

The project was begun by defining the operation environments and travel chains that were to be examined. To chart the needs of users and actors and to map the identified problem areas, interviews and a written enquiry were conducted. The current accessibility state of operation environments and travel chains was charted on the field. Representatives of various user groups took part in the charting. Proposals for accessibility-promoting measures and their phasing were made. Necessary further developments and surveys were also documented.



CONTINUANCE OF PROJECT WORK IS DESIRABLE

If the proposed measures are implemented, the possibility of persons with reduced mobility and function to use inland water transport services and services of related tourist resorts will be improved. The project established a co-operative network for accessibility. It is highly desirable that the network continues its operations and dialogue. The project produced an understanding of the framework within which accessibility of small municipalities is implemented.



Students of Lehtimäki Folk High School for Mentally Handicapped (Image: Lehtimäki School, 2005)

The project was part of the Elsa programme of the Ministry of Transport and Communications. Other implementers were the municipality of Lehtimäki, the City of Ähtäri, the Seinäjoki Parish, Lehtimäki School for Mentally Handicapped, Lehtimäki Service and Activity Centre, Vaasa Road District, the State Provincial Office of Western Finland and Ramboll Finland Oy.

MORE INFORMATION

Publications of the Ministry of Transport and Communications 39/2005.

Electronic version is available in Finnish at:

http://www.mintc.fi/oliver/upl565-3905_raportti.pdf

<http://www.elsa.fi>

Chief Inspector
Irja Vesanen-Nikitin
Ministry of Transport and Communications
tel. +358 09 1602 85 44
firstname.lastname@mintc.fi

Project Manager
Ramboll Finland Oy
Ulla Loukkaanhuhta
PL3 (Piispanmäentie 5)
FIN-02241 Espoo
firstname.lastname@ramboll.fi

Transfer of Passengers to Aircraft

STAIRS ARE THE MOST SIGNIFICANT BARRIER

Transferring passengers with reduced mobility to aircraft by carrying them up the stairs of a plane or up transferable chairs is a major safety risk. Passengers may feel intimidated, and this practice does not promote good work ergonomics.

The project was based on the proposal by the Commission of the European Communities for a regulation concerning the rights of persons with reduced mobility when travelling by air. The proposal would make the airport management responsible for organising airport assistance to persons with reduced mobility. The responsibility would cover the whole journey from departure to arrival. The journey is considered to cover airport car parks and airport public transport terminals as well.

CURRENT PRACTICES AND EQUIPMENT SURVEYED

The project examined current equipment and means used to assist passengers with reduced mobility to board an airplane in Finland and few other select countries. Information on currently sold equipment facilitating the transfer of passengers with reduced mobility to aircraft when a passenger bridge is not available was also gathered. The project charted the problems relating to current practices of Finnish airports from the perspective of both passengers and personnel.





ELSA PROJECT SUMMARY

February 2006

THE PROPOSAL FOR A REGULATION SUGGESTS ACTIONS

Actions suggested in the proposal include the preparation of quality requirements and related monitoring for Helsinki-Vantaa airport, determining of charges collected from airlines for providing services for PRM passengers (passengers with reduced mobility) based on the passenger volume of the previous year by airline and establishing airport entry and exit points. PRM passengers can use these points to notify the airport on their arrival and need for assistance.

Until new equipment is acquired, accessible travelling at Helsinki-Vantaa airport can be promoted by prioritising the access of aircraft carrying or boarding persons with reduced mobility to jetways. This can be realised through new recommendations for apron control. The necessary information will be provided by airlines and ground handling agents.

The goal is to phase out carrying of passengers with reduced mobility to aircraft in larger airports. Airports considered large are Helsinki-Vantaa, Oulu, Rovaniemi and Tampere-Pirkkala airports. However, considering the currently low passenger volume and high cost of the equipment, it is not possible to purchase necessary devices for all Finnish airports.

The estimate was that the regulation be ready and adopted not until spring 2006 at the earliest. Due to possible amendments to the text, implementation of mentioned actions is not certain. Preparations for the actions can nevertheless be made. The main responsibility for the launch rests on the Ministry of Transport and Communications.

MORE INFORMATION

Publications of the Ministry of Transport and Communications 69/2005

www.mintc.fi

www.elsa.fi

Moderator
Irja Vesänen-Nikitin
Ministry of Transport and
Communications
tel. +358 09 160 28544
firstname.lastname@mintc.fi
fi

Project Manager
Jyrki Paavilainen
Sito-yhtiöt
tel. +358 400 719 017
firstname.lastname@sito.fi

Legal Advisor
Silja Laakkonen
Finavia, Airports Department
tel. +358 09 8277 2304
firstname.lastname@fcaa.fi

HR-Controller
Petra Erätuli
Airpro Oy
tel. +358 09 8277 2553
firstname.lastname@airpro.fi

Planning and Implementing Accessible Routes in New Housing Areas

AIMING FOR AN ACCESSIBLE TRANSPORT ENVIRONMENT

The project approached the planning of accessible routes from two directions:

- How is an accessible target network established on a new housing area under planning?
- What are the concrete planning and implementation methods?

Publications discussing city planning, accessibility and traffic planning as well as legislation and guidelines were used as source material. The report contains an extensive bibliography of accessibility publications that can be utilised by traffic and city planners.

CITY PLANNING METHODS

The project surveyed ways to observe accessibility in the master planning and city planning processes. Accessible transport environments can be promoted in various ways: by setting it as a separate planning objective, through planning regulations or by indicating accessible routes in planning statements and recommendations. Essential is that accessibility is taken into consideration during the impact assessment of finished plans. Extending the impact assessment of the site in question to a wider area was considered necessary especially with regard to supplementary zoning.



ACCESSIBLE ROUTE NETWORK

With regard to the planning of non-motorised traffic networks, transport environment planning should consider accessible route networks as separate entities. It is not very often that the entire non-motorised traffic network can be built completely accessible, but the accessible attainability of services and seamlessness of routes should nevertheless be ensured. Routes between residential areas, services and near-by recreational areas and the pedestrian access to public transport stops constitute the framework of an accessible route network. Separating walking from cycling should be aimed for at least on the main routes. If the lack of space or higher costs should prevent the implementation of separate walking and cycling routes, the combined route should be sufficiently wide. Significant differences in altitude can complicate the implementation of accessible routes. To facilitate mobility, pedestrian rest areas will be built on lengthy uphill sections. In order to ensure possibilities of mobility, it is of central importance that crosswalks be built to observe the needs of all users. Tangible stripes facilitating the orientation of the visually impaired are elements that guide all passengers.

In order for accessible routes and the most significant pedestrian routes to be prioritised also in maintenance and repair work, all relevant information is to be presented to those responsible for maintenance.

The results can be utilised in

- quality documents that steer the master planning, construction planning and implementation processes of new housing areas
- the master planning and city planning of housing areas
- accessibility surveys and improvements of existing housing areas
- supplementary zoning.

The project was financed by the Ministry of the Environment and the City of Tampere.

MORE INFORMATION:

Report: Planning and Implementing Accessible Routes in New Housing Areas, Case Vuores

Electronic version is available in Finnish on the Elsa programme site: www.elsa.fi

Impacts of an Accessible Transport Environment on the Functional Skills and Service Needs of the Elderly

Characteristics of the environment, distances to services and the accessibility of transport services have a significant effect on elderly people's need for assistance and on the preconditions for independent management. The project charted the impacts that shortcomings in the transport environment and near-by services have on the lives of elderly people.

The project was built on three empirical case studies:

- longer distances to services due to closing down of the local store in the Asemanseutu residential area in Hämeenlinna
- Hämeenlinna service route Seiska and its users
- possibilities of mobility for the elderly residents of Eteläinen village in Hauho.

The main research methods were thematic interviews of elderly people and municipal officials and a survey posted to the residents of Asemanseutu area.



ACCESSIBILITY IMPEDIMENTS ARE EXPENSIVE

The case studies indicated that the shortcomings in the transport environment and near-by services not only considerably increase the elderly people's need for help but also incur extra costs especially for relatives and the elderly themselves. The current classification of functioning, disability and health and the currently used income criteria delimited the municipal responsibility for providing assistance. Apart from financial costs, possibilities of mobility had an impact also on the quality of life, social interaction and mental wellbeing.

NEED FOR ASSISTANCE DEFINED BY THE ENVIRONMENT AND FUNCTIONING SKILLS

The ways in which the various aspects of a transport environment effect independent management were examined in relation to individual functioning skills and possibilities of mobility provided by different types of housing areas. What determined the independent management of those whose function is considerably reduced was often the accessibility of the pedestrian environment and the near-by services. Accessible public transport had the greatest impact on the mobility of elderly people whose physical condition and functioning skills are average. On the other hand, all residents living without a car in areas that do not offer public transport and have no near-by services, needed help irrespective of their functioning skills.

The project also produced estimated calculations of costs caused by the increased need for help that are inflicted on various parties by the changes in the environment.

MARCOECONOMICAL ACTIONS THROUGH CO-OPERATION

The results allow macro-economical investments to be made in the development of the transport environment and related services. Costs or savings caused by changes to the need for assistance are to be taken into account when assessing investments. The knowledge of the social services on customers' needs, problems related to the environment and need for assistance caused by the shortcomings in the neighbourhood should be expressed so that the information can be utilised by technical departments and land-use planners.

The work was financed within the framework of the Elsa programme by the Ministry of Transport and Communications and the Ministry of Social Affairs and Health.

MORE INFORMATION

Reports of the Ministry of Social Affairs and Health 2005:11. Accessibility and Service Needs of Older People.

Electronic version is available in Finnish at:

<http://www.stm.fi> and

<http://www.elsa.fi>



Accessibility as a Part of the Municipal Road Safety Plans



CRUCIAL ROLE OF MUNICIPALITIES

Road safety and accessibility are both important transport policy objectives that are concretely linked together in municipal work. Many fundamental issues are common to both road safety and accessibility. There are differences as well. The most significant of both are listed below:

- + The aim of road safety measures as well as accessibility promotion is to enable flexible, independent and safe mobility for as many people as possible.
- + Many road safety measures promote accessibility and vice versa.
- + Organisations for the disabled and the elderly that are central actors in accessibility planning are already occasionally taking part in road safety planning processes. In counties, accessibility is often incorporated into the tasks of the provincial working groups for road safety.
- + Within the framework of both issues, problem areas are surveyed by means of field visits and enquiries.
- Whereas road safety planning is often confined to the level of needs analysis and general planning, accessibility issues are approached in more detail.
- The concept of accessibility is yet not established and accessibility promotion is diverse in nature. Road safety operating models are more established.
- While accessibility can better be promoted on continuous routes or undivided regions, road safety measures spread out across extensive areas.

LEVEL OF SOLUTIONS DEPENDING ON THE TARGET

It is worthwhile and in many ways possible to bring accessibility up in conjunction with road safety planning. Actual accessibility surveys should be connected to road safety plans only in special cases. Such are for example small municipalities whose densely populated areas are small in size. With regard to the needs analysis, accessibility should be observed for example when making field visits and enquiries. More detailed accessibility surveys can be conducted as necessary, and identified problems can be taken into consideration when appropriate road safety measures are selected. Road safety plans are to include the principles for accessible implementation of measures.

The model of extensive interest group co-operation that is used in accessibility work could be applied to road safety planning as well. Future strategic accessibility work should be made in closer co-operation and interaction with related road safety work, and vice versa. Organisations operating on the regional level should define clear, individual policies for promoting accessibility. This concerns particularly the Finnish Road Administration, which is the most important partner in municipal road safety work.

The project was commissioned within the framework of the Research and Development Programme Elsa by the Finnish Road Administration and the Ministry of Transport and Communications. The discussion and deliberation are based on the analysis of municipal road safety work and accessibility promotion, the responses to the e-mail survey and the debates held during expert workshops.

MORE INFORMATION

Tiehallinnon selvityksiä 2/2005 (Reports of the Finnish Road Administration 2/2005).

Electronic version (PDF) is available in Finnish at:
<http://alk.tiehallinto.fi/julkaisut>
<http://www.elsa.fi>

ELSA PROGRAMME PUBLICATIONS

Research and Development Projects

City of Espoo, Technical and Environment Services. 2005. Esteli, Espoon esteetön joukkoliikennelinja (Accessible Public Transport Line 19 in Espoo).

City of Espoo, Technical and Environment Services. 2006. Esteettömien bussipysäkkien testaus ja kuljettajakoulutuksen kehittäminen (User Tests of Accessible Bus Stops and Education Plan for the Drivers).

City of Espoo, Technical and Environment Services. 2006. Tapiola Accessible Bus Terminal.

Planning and Implementing Accessible Routes in New Housing Areas, Case Vuores. 2005.

Development Project for Accessible Environmental Products. 2006.

Promoting Accessibility in the City of Kotka. 2005.

Accessibility Surveys and Implementation Programmes in the Small Localities of the City of Kiuruvesi and the Municipality of Sonkajärvi. 2006.

City of Forssa, City Centre Accessibility Survey and Public Transport Accessibility Charting. 2006.

Helsingin kaupungin liikennelaitoksen julkaisusarja D 11/2006; Matkustajainformaation käytettävyyden toimenpideohjelma (Helsinki City Transport Publication Series D 11/2006: Action Plan for Accessible Passenger Information).

Accessible Transport Environment in the City of Hyvinkää. 2005.

Accessible Public Transport in the Centre of Oulu. 2006.

City of Järvenpää, Accessibility Action Plan and Public Transport Development Plan. 2005.

Ministry of Transport and Communications. 2006. Tulevaisuuden kaukoliikennebussi 3 (Accessible Future Coach 3).

Publications of the Ministry of Transport and Communications 39/2005. Esteettömyyttä vesiliikenteestä ja matkailupalveluista nauttimiseksi (Accessible Water Transport and Tourist Services).

Publications of the Ministry of Transport and Communications 39/2005. Improving the Fluency, Guidance and Safety of Accessible Traffic Environments.

Publications of the Ministry of Transport and Communications 43/2005. Evaluation of Client Information Profiles and Databases of Travel Dispatch Centres.

Publications of the Ministry of Transport and Communications 62/2005. Accessibility in Quality Corridors.

Publications of the Ministry of Transport and Communications 69/2005. Air Passenger Boarding.

Liikenne- ja viestintäministeriön julkaisuja 39/2006; Esteetön valaistus ja selkeät kontrastit asema-alueilla (Publications of the Ministry of Transport and Communications 39/2006: Accessible Lighting and Colour Contrasts in Public Transport Terminals and Related Environments)

Liikenne- ja viestintäministeriön tutkimusraportti 2006; Kotkan palveluliikenteen kehittäminen (Research Report of the Ministry of Transport and Communications. 2006. Development of Service Routes in the City of Kotka).

Ratahallintokeskuksen julkaisuja A 12/2006; Pasilan aseman esteettömyyskartoitus ja toimenpideohjelma (Publications of the Finnish Rail Administration A 12/3006: Pasila Terminal Accessibility Survey and Implementation Programme).

Reports of the Ministry of Social Affairs and Health 2005:11. Accessibility and Service Needs of Older People.

Finnish Association of Local and Regional Authorities. 2005. Esteettömyys talvihoidossa (Accessible Winter Maintenance).

Tiehallinnon julkaisu TIEH 1000095–05; Joensuun seudun joukkoliikenteen ja kevyen liikenteen laatukäytävät (Publications of the Finnish Road Administration TIEH 1000095-05. Joensuu Quality Bus, Walking and Cycling Corridors).

Tiehallinnon selvityksiä 2/2005; Esteettömyys kuntien liikenneturvallisuus-suunnittelussa (Reports of the Finnish Road Administration 2/2005. Accessibility in Municipal Traffic Safety Planning).

TKL 25, Accessible Pilot Line. 2006.

Other Publications

Kommunikationsministeriet. 2005. Mot ett tillgängligt transportsystem.

Ministry of Transport and Communications. 2005. Skills and Attitude, Accessible Customer Service in Public Transport. DVD/VHS.

Ministry of Transport and Communications. 2005. Accessible Customer Service in Public Transport.

Publications of the Ministry of Transport and Communications 90/2005. Attitude Matters. Final Report of the Working Group of the Ministry of Transport and Communications on Accessibility and Education Related Issues.

Ministry of Transport and Communications Finland. 2005. Towards Accessible Transport.

Ministry of Transport and Communications. 2006. Accessible Transport and Traffic Environments – Experiences from the accessibility projects of Finnish local Authorities.

Academic Master's Theses

Jouttijärvi Samuli and Kärki Heikki. What is Clear Public Transport Information? Master's Thesis. University of Jyväskylä, Department of Communications.

Levola Katja. Grandpa Guns the Car – Driving to the Village Centre Local Store. Master's Thesis. University of Tampere, Department of Regional Studies.

Siik, Saara Kirsikka. Design for All – Principle in Urban Planning – Lohja City Center as an Example of Inclusive Environment. Master's Thesis. Tampere University of Technology, Department of Architecture.