

FINNCONTACT



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TECHNOLOGY TRANSFER, IMPORTANT TOOL FOR INTERNATIONAL COOPERATION



THE FINNISH NATIONAL ROAD ADMINISTRATION, FINNRA, IS CURRENTLY CELEBRATING ITS BICENTENNIAL. THROUGHOUT ITS HISTORY, FINNRA'S TECHNICAL DEVELOPMENT HAS BEEN TREMENDOUS. AT THE INITIAL STAGE MOST OF THE NEW TECHNOLOGIES CAME FROM SWEDEN AND THEN LATER FROM THE INDUSTRIALLY DEVELOPED EUROPEAN COUNTRIES. DURING THE POST WAR ERA THE AMERICAN HIGHWAY AND TRANSPORTATION MODELS REPRESENTED THE MOST MODERN TECHNOLOGIES. THE TWO WORLD BANK HIGHWAY LOANS DURING THE 1960s AND 70s HAD A STRONG TECHNOLOGICAL AND MANAGERIAL IMPACT ON FINNRA.

From the late 1970s Finnra was already capable of exporting Finnish know-how. Initially this was part of the Finnish development aid. Later developments led to an increase in commercial exports.

The main part of road-related international cooperation from 1930s to 1960s was conducted under the Nordic Road Association, with members sharing the same Nordic road problems. In PIARC and IRF the Finns are no longer only passive participants, but also recognised speakers at international events. In OECD, the representatives of Finnra have taken part as Steering Committee members in the road transport programme and more notably as experts in preparing various policy guidelines.

The changes in Eastern Europe and the establishment of the World Interchange Network, WIN, were the initiatives for Finnra to participate in a more organised way in the international technology transfer. The Finnish Technology Transfer Center, FinnT², is the Finnish node to the inter-



The panel of WIN's success stories at the WIN General Assembly in Casablanca, Morocco, in 1998 consisted of five presentations. The panelists here (from left): Hernán Fernández Ordóñez (Colombia), Jarmo Ikonen (Finland), Maurice Truchon (Canada), Andrew Pentecost (Australia) and a person on behalf of Abdelhakim Jakani (Morocco).

national technology transfer. In addition to FinnT², the Finns and the U.S. Federal Highway Administration are jointly supporting the Baltic T² centers.

Today the number of requests to FinnT², and the responses to such requests, mainly concerning Finnish technology, are increasing in geometric scale. This really proves that the long historical process has led us from receivers to providers.

This issue of FinnContact is devoted to international affairs and export services of Finnra. It will be available at the International Seminar in connection with the Finnra Bicentennial Festival in Turku, Finland, in June, 1999, as

well as at; the International Road Federation's (IRF) regional conference "European Transport and Roads" in Lahti, Finland, in June, 1999; the World Road Association's (PIARC) XXI World Road Congress in Kuala Lumpur, Malaysia, in October, 1999; and the event "Winter Road Congress in Finland" in Tampere in February, 2000.

Mr. JUKKA ISOTALO, Finnra

This Issue:

FINNRA EXPORT PROJECTS

EXPORTING FINNISH ROAD KNOW-HOW WITHIN A PUBLIC ORGANISATION



The construction of Pha Rung shipyard in Vietnam in the 80's was the first of Finnra's overseas projects. In the 80's Finnra, then the Roads and Waterways Administration, was responsible also for waterways engineering. This shipyard project was financed by the Finnish International Development Agency, FINNIDA.

The Finnish Road Administration, Finnra, is in the continuous process of reform. At the moment Finnra's organisation is internally divided into two: Administration carrying out the public authority duties and Production providing services for the Administration and other clients. In the next phase of the process Production will be made an independent organisation.

Finnra's Production consists of both contracting and consulting activities and, of course, any combination of the two in form of full-service packages. The internal division of Finnra has made it possible to develop the activities in a business-like manner. This has led to defining the new roles, and given the momentum to a new working culture grouped around core tasks. The work is carried out under new types of contracts, and the processes to carry out the contracts are streamlined to be more effective. The culture emphasises the value of services to the client. While the domestic Finnra Administration with its districts is, and will be in future, the most important client, Finnra Production must broaden its client base to avoid total dependency on one

client: the annual state road budget levels and the domestic competitiveness.

The growing international activities and projects can be seen as a natural part of the new wider role. Finnra has been first involved as an administrator and provider of experts to various projects implemented under Finnish Bilateral Aid to developing countries in the 80's and early 90's. The economic crisis of the early 90's, and later Finland's membership in the European Union (EU), changed the role quickly as Finland no longer financed bilateral infrastructure projects. The project experience gained from the projects and the trained staff made it possible to compete for internationally financed projects. The first of these projects

were successfully implemented in the beginning of 90's and new strategies were formed. A special public-private partnership was established in 1996 when Finnra joined forces with three of the biggest private Finnish consulting companies and formed Finnroad Ltd. Finnroad's aim is to market the combined experience of the partners, and prepare tenders for large international consulting projects for the partners to implement. This approach has been quite successful and Finnroad has won numerous projects. The best areas of expertise have been institutional development, road maintenance development and road safety projects. The partner's knowledge of road management in cold climates, and of developing road management organisations is especially valuable in the former Soviet Union countries having to restructure their road sectors quickly.

An important part of any international development project is technology transfer. We saw in Finnra that a separate unit to specialise in human resource development was a must when targeting in implementing twinning and training projects. IHME, the Institute for Highway and Maritime Education was established in 1990 and has since organised all training related to export activities. The clients include institutions like the World Bank and EU, but also regional road administrations and construction companies.

The fact that Finnra has put a lot of effort in developing both road management techniques and organisation structures in seeking more



The Road Maintenance Project in the Lusaka and Copperbelt Regions, Zambia, comprehended the largest road projects of Finnra in Africa. They were carried out in 1989-1996.

efficient domestic operation practices has not only benefited the Finnish taxpayers in form of reduced road costs but also in creating new export business opportunities. Finnra gains also from international projects through development of ideas and methods, and through benchmarking. There are still great demands for further road sector restructuring in the former Soviet Union countries and countries joining EU. The implementation of the organisation reforms requires both public and private sector experience and twinning approaches get more and more support, especially in EU. Finnra has found a way to

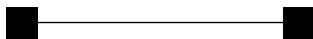
combine Finnish know-how for the benefit of the client, proven by several successful projects like the Kyrgyz and Azerbaijan road sector reforms.

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Mr. RAIMO SALLANMAA, Finnra

IMPROVING ROAD SAFETY IN LITHUANIA



The Finnish National Road Administration (Finnra), Viatek Ltd and the Technical Research Centre of Finland (VTT) have started an 18-month road safety project in Lithuania this year. The project is funded by the European Union Phare

Program. The road safety situation in Lithuania is among the worst in Europe. The project will compile a 5-year road safety improvement program, which will include structural measures, training, education and distribution of information.

Before the actual program is compiled, a study will be made of the organization and division of work in Lithuania's current road safety work. The agencies involved include the Ministry of Communications and Transportation, the Road Administration, traffic police, vehicle inspection authorities, the Ministry of Education, the cities of Vilna and Kaunas, insurance companies, etc. The goal is to find current strengths and pinpoint possible weaknesses. During the course of the project, local road safety workers

will be trained to ensure that the 5-year program will be implemented without any problems. Funding of road safety work is also a problem in Lithuania. With the present level of funding, work consists mainly of providing first aid to the worst sites. The project will also search for new sources of funding.

In 1997 there were 5319 accidents resulting in personal injury in Lithuania. In these accidents, 725 people were killed and 6198 were injured. Economic losses totaled about 1800 million FIM (325 million USD). One reason for the rise in the number of accidents is the strong increase in motor vehicles during the past ten years. While in 1987 there were 199 cars per 1000 inhabitants, in 1997 the corresponding figure was 277 (about half of Finland's number). In proportion to the number of cars, about four times as many accidents resulting in fatalities happen in Lithuania compared with Finland. It will also be important to improve the status of pedestrian and bicycle traffic. About one in three persons killed or injured in traffic in Lithuania is a pedestrian. Figure below shows the development of road safety in Lithuania from 1987 to 1998. The trend is alarming.

The project is being conducted in close coop-

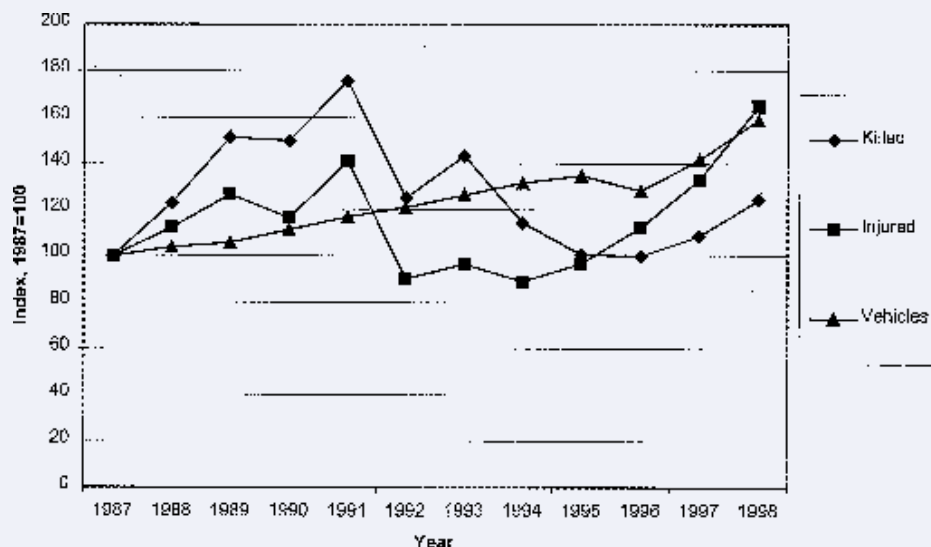
eration with Lithuania's Road Administration, which is responsible for public roads. The study will also include the road safety problems in Vilna and Kaunas, two of Lithuania's largest cities. The world's longest pedestrian tunnel is currently being built in Kaunas. The project is being funded by the World Bank.

The Transport and Road Research Institute (TRRI) based in Kaunas has for several years produced statistical information for the Lithuanian Road Administration about accidents and their location on the road network. In 1997-98, the World Bank funded a project in Lithuania in which Finnra and VTT developed a Lithuanian version of the Finnish TARVA program (TARVA means Traffic Safety Effects Achieved by Road Improvement). As a result, during the past two years it has been possible to gauge the effects of measures planned for these black spots on the road network. The TARVA program can be used in defining the impact of road safety measures. The "Lithuanian TARVA" was used to calculate the safety effects of a road improvement program and, through the decrease in accidents, the corresponding cost-benefit ratio. During the first year the required database was compiled at VTT, but already in the following year TRRI gathered the necessary data and updated the

database. Although the program did not include the entire public road network (only the main roads were included), the program was accurate enough. After all, nearly all the sites requiring measures were located on the main road network. Already then the poor status of pedestrian and bicycle traffic became apparent, for the most worthwhile measures were minor measures that improved the status of pedestrians. They included traffic sign arrangements, crosswalk markings, speed limits, pedestrian paths, etc. Viatek Ltd was also checking the usefulness of the compiled plans and measures from the standpoint of a bidding competition.

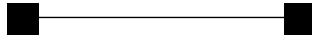
Two long-time experts of the project, Valde Mikkonen and Ulla Alapeteri, have worked in Vilna since May, 1999. The team is headed by Professor Valde Mikkonen, who has a wide range of experience with road safety work in different parts of the world. The other members of the team: Wladimir Segercranz (VTT), Martti Roth (Viatek), and Jorma Helin (Finnra), also have extensive experience. Bilal Atiye and Mauri Möttönen are responsible for the project at Finnra's Export Services.

Ms. ULLA ALAPETERI, Finnra



Development in road safety in Lithuania in 1987-1998.

STRENGTHENING THE ROAD SECTOR IN THE KYRGYZ REPUBLIC



The Finnish National Road Administration (Finnra) and Roughton International, a British consulting company, completed their Kyrgyzian Road Management development project at the end of July, 1997. The final report of the project was delivered to their client and financier, the Development Bank of Asia, the following month. The project lasted nearly seven months, and it cost about FIM 4 million (USD 0.8 million). The project was headed in Kyrgyz by the author of this article.

The commission given to the Institutional Strengthening of the Road Sector project was quite extensive. The project covered Kyrgyzian traffic and road policy, legislation in the road sector, organization of road management,

evaluation of the need for road management funding and methods of guaranteeing funding, maintenance systems, road safety, and development of road management personnel.

It may well be said that the purpose of the project was to act as a spur toward a better future for the Kyrgyzian traffic and road sector, and to indicate the direction the development should follow. The goal in Kyrgyz is modern, efficient, economical road management in a market economy environment. The time allotted for the project was short, but a three-day meeting held at the conclusion of the project, with representation from the Development Bank of Asia, the state of Kyrgyz and the consultant, indicated that the goals were reached and our work was valued highly.

The main recommendations for further development are:

- the traffic and road policy document we compiled should be approved as a foundation for further development
- the country's road laws should be renewed (we prepared a new proposal)
- road management organizations should be rearranged:
 - all traffic and road sector matters that are currently dispersed should be centered in the Ministry of Communication and Transportation, and the road department of the Ministry should be strengthened



A traffic congestion on a Kyrgyzian road.

- the road districts should be formed into client organizations
- the currently small road master districts should be combined into units covering 400 - 600 km of roads, and the staff should be trained for contracting. The road master districts can function as agencies for the time being, but after a few years road management should be opened for competition. Later, the road master districts may possibly be privatized.
- according to our estimate, road management will need about FIM 400 million (USD 80 million) per year. Funding will be guaranteed by establishing a separate road fund beginning in 1998. Money will be collected by means of tolls and a tax included in the price of fuel.
- renewal of road management administration systems (such as the road register, other administrative support systems, maintenance systems)

- measures that will improve the poor road safety situation should be initiated. National and regional road safety plans should be compiled.

The required changes are major and fundamental. Implementation of the changes should be supported by a systematic, coordinated personnel training schedule. It is clear that during the next few years the development of Kyrgyz's road management will require outside development funding and outside consulting. The Development Bank of Asia, which financed our project, requires implementation of the main development measures we proposed as a condition for future road loans. The bank is ready to continue its support, but other financiers are also needed.

In many ways the Kyrgyz project was an interesting and instructive experience. Except for homesickness, conditions and life in Bishkek brought no complaints, unless one

wishes to gripe about the extreme summer heat.

The multinationality of the team was very rewarding. In addition to Markku Teppo, Raimo Tapio and Mauri Pukkila from Finnra, there were three people from England, one from New Zealand, local consultants, interpreters and office staff. At times the Finns and Brits had spirited verbal clashes, but the differences of mind usually brought matters to a better final result.

It also appears that our project was a pilot for successful cooperation between Finnra and Roughton International in the consulting market of the Central Asian traffic and road sector. Work has continued in the Kyrgyzian Bishkek-Osh main road planning project and the European Union TACIS/TRACECA Road Maintenance program.

Mr. KARI NYKTER, Finnra



One of the Finnish experts, Mauri Pukkila, in a road maintenance station in Kyrgyz.

A FINNISH PROJECT AT THE OPPOSITE END OF THE WORLD



At first sight, it may seem that road management and road maintenance experience in the northern hemisphere is not applicable in the southern hemisphere. In the north, frosty weather, snowfalls, snow banks beside roads and frozen seas and lakes are predominant during half the year, whereas tropical climate, humidity, a

warm ocean all-year-round and sometimes cyclones, dominate in the south. Can experts from a country specialised in arctic conditions provide for road management to the opposite side of the world? Can an administrative lawyer from Finland help professionally in the tropics? Perhaps surprisingly, yes!

The Solomon Islands is a country in the South Pacific consisting of more than 900 islands and reefs in the South Pacific. It became a parliamentary democracy in 1978 and belongs to the British Commonwealth. There are nine provinces with a provincial government in the country. The nation's population is estimated to be over 400,000 and the first census is taking place on this year. More than 90 % of traffic performance is concentrated in the Guadalcanal province. The most important road is the 20 km long main road leading from the airport to the capital Honiara.



The road maintenance training centre established by the Finnish project team. Persons from left: Bilal Atiye (from Finnra), Waddah Chehadeh (Kuwait Fund), Ayad Al-Gharabally (Kuwait Fund), Derick Bako (MTWCA), Nami Osman (MTWCA), Moses Virivolomo (MTWCA) and Kaisa Leena Välipirtti (Finnra).



Honiara Main Road in the Solomon Islands early in the morning.

There are about 1,300 kilometres of public roads in the Solomon Islands. The Ministry of Transport, Works, Communications and Aviation (MTWCA) is responsible for 850 kms of main and secondary roads and the provinces for about 430 kms of provincial roads. There are also urban roads and private roads in the country. Almost the whole road network is in need of rehabilitation. Many bridges are hazardous for road users or have collapsed because of heavy rains and streams.

The Finnish National Road Administration (Finnra) was chosen to implement the training component in the field of road maintenance under the Honiara Main Road Upgrading Project. The project was financed by the Kuwait Fund for Arab Economic Development. This was the very first project financed by the Kuwait Fund in which Finnra participated. The representatives of the Fund visited the project in the Solomon Islands in February, 1999.

An Australian-New Zealand building consortium is carrying out the road upgrading in 1998-99.

Four Finnra experts participated in the project during 18 working months. In addition to the Finnish team leader, a road maintenance

training expert, a road management expert and a legal expert worked 2-8.5 months in the Solomon Islands. The project included the following tasks:

- establishment of a road maintenance training centre in the Solomon Islands
- road maintenance training in the Solomon Islands
- road maintenance training abroad
- a road network study and road classification
- review and drafting of a Roads Act.

A modern training centre for the Ministry (MTWCA) was established in Honiara. It provides suitable premises for classroom training, seminars, etc. The centre is equipped with a modern audio-visual apparatus and there is also office space for trainers in the building. More than ten training courses in road maintenance were organised in this centre during the project.

As a part of the project, two engineers from MTWCA participated for three months training in Finland and Kuwait.

The road network study was carried out in order to enhance the Ministry's ability to plan and organise road maintenance activities. The road study included a functional classification

of roads, a road inventory and survey, development of a road data bank, vehicle operating cost calculations and maintenance strategy assessment.

A new Public Roads Act was drafted for the Solomon Islands in order to spell out the responsibilities of the road authorities, road users and land owners. Dialogue with the relevant authorities was held during the preparation and the comments received were included in the final draft. Also a draft of the Road Fund Act was prepared to enable a reliable source of road maintenance funding.

After the completed project we Finnish experts left these happy islands in the Pacific. Road maintenance and legal expertise from remote Finland was given to a remote Pacific country – and the warm, cheerful, stressless Solomon Islands attitude toward life was one thing we learnt about during the project. The stay in the Solomon Islands was especially enjoyable last winter when the difference in temperature between Finland's Lapland and Honiara was 80 degrees centigrade!

Ms. KAISA LEENA VÄLIPIRTTI, Finnra