Finnish Transport Agency
Planning and Projects
Ari Huomo, 31.10.2016
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The Finnish Transport Agency is responsible for the Finnish transport system.

We are responsible for the Finnish roads, railways and waterways and for the comprehensive development of the transport system.

We promote traffic safety and the balanced and sustainable development of the regions.

We are a multidisciplinary expert organisation specialising in transport, and operating under the jurisdiction of the Ministry of Transport and Communications.

Annual budget approximately 2.1 billion €

Infrastructure assets 19.6 billion €

We enable smooth, efficient and safe travel and transport.

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FTA personnel 620 experts

12,000 Number of people the FTA employs indirectly through projects

25% of infra-markets volume

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Finnish Transport Agency organisation
1.10.2016

Director General
Antti Vehviläinen

Communications and Sustainability
Miia Apukka

Operations Management
Sinikka Hartonen

- Finance and Performance Management
  Kristiina Tikkala
- Legal Services and Procurement
  Laura Kuistio
- HR and Administration
  Hannu Mäkikangas

Planning and Projects
Rami Metsäpelto

- Project Management
  Kristiina Laakso
- Transport and Land Use
  Matti Levomäki
- Project Planning
  Päivi Nuutinen
- Project Implementation
  Pekka Petäjäniemi

Infrastructure Management
Mirja Noukka

- Maintenance
  Jukka Karjalainen
- Engineering and Environment
  Markku Nummelin

Traffic and Information
Tiina Tuurnala

- Information
  Jan Juslén
- Traffic Services
  Virpi Anttila
- Traffic Management Centres
  Petri Rönneikkö

Regional steering
Jarmo Joutsensaari
Proposed appropriations 2016, 1,843 M€
(% change compared to 2015)

- Private road subsidies 3 M€ (-40 %)
- Commuter ferry services 18 M€ (+1,5 %)
- Land acquisition 35 M€ (0 %)
- Repair backlog 100 M€ (new)
- Public transport purchases * 18 M€
- Competitiveness in maritime transport 100 M€ (+16%)

- Development projects and the West Metro 526 M€ (-4,4 %)
- Basic transport infrastructure management 965 M€ (+3,4 %)
- FTA's operating costs 79 M€ (-2,7 %)

Budget appropriations granted to the FTA and the ELY Centres as net budgets without supplementary budgets
- Includes the public transport subsidy to large and medium-sized cities
Repair Backlog - Subjects

- Road pavement, road construction and equipments
- Old bridges with weight limitation
- Track construction ja switches of railways
- Electrification and signalling of railways
- Railway yards
- Searoutes signalling and kanaltechnic
Basic transport infrastructure management budget 2010-2019

Siirto väylähankkeista perusväylänpitoon
Korjausvelkaohjelma
Perusväylänpidon kehys
Vesiväylänpito
Radanpito
Tienpito
Ostovoimakorjattu, MAKU 2010 = 100
Budget proposal 2016: large investment projects according to financing model

- Post-financing model: 56 M€
- Public-Private Partnership model: 106 M€
- Subsidies (West Metro): 21 M€
- Traditional budgetary financing: 343 M€

Total budget proposal 2016: 526 million €
Government funding of transport investments per governmental term

- Decreasing funding for investment projects

Graph showing the funding trends from 2008-2023, indicating a decreasing trend in investment projects.
State funding for large investment projects underway at the Projects Division (million euros)
Current Large Infrastructure Projects

ROAD PROJECTS
1. Ring Road III 2nd phase
2. E18 Hamina bypass
3. Main Road 8 Sepänkylä bypass
4. Main Road 19 Seinäjoki eastern bypass
5. E18 Kotka separate project
6. Main Road 12 Tampereen rantaväylä
7. Road 101, Improvement of Ring Road I
8. Main Road 4 at Rovaniemi
9. Main Road 5 at Mikkeli
10. Main Road 8 Turku-Pori
11. West Metro park-and-ride facilities
12. E18 Hamina-Vaalimaa (PPP project)
13. Main Road 6 Taavetti-Lappeenranta
14. Main Road 3 Grade separated junction at Arolampi
15. Road 148 Improvement at Kerava
16. Secondary Road 77, Viitasaari-Keitele
17. Main Road 3, Tampere-Vaasa, Laihia 1st phase
18. Main Road 22 Oulu-Kajaani-Vartius
19. Main Road 8, investments in roads to Pyhäjoki nuclear Power plant
20. Road connections to the bio-product mill in Äänekoski

WATERWAYS PROJECTS
28. Pietarsaari channel
29. Rauma channel
30. Realignment of Savonlinna deep channel

RAILWAY PROJECTS
20. Rail connections to the bio-product mill in Äänekoski
21. Ring Rail Line
22. Ostrobothnia rail line
23. Electrification of railway line between Rovaniemi and Kemijärvi
24. Western track in Central Pasila
25. Riihimäki triangle track
26. Helsinki-Riihimäki, increased capacity, 1st phase
27. Electrification of railway line between Pännäinen and Pietarsaari
Government Decision on 4.4.2016

1. Luumäki - Imatra – Russian Border  155 M€
2. Main Road 4 Oulu – Kemi  150 M€
3. Main Road 5 Mikkeli-Juva  125 M€
4. Main Road 12 Lahti Ringroad  250 M€
5. TramJoker Helsinki  85 M€
6. Tampere Tram  75 M€
Contract Models in FTA – all in use

- **D-B-B** = Design Bid Build, all the phases under separate agreements, traditional method used all around the world
- **D-B** = Design-Build, Design and Build phases are combined to the same agreement, coming more popular method
- **CM** = Construction Management, provides Owner with a central focal point for managing and administering all phases of project construction. Treats planning, design, construction as integrated tasks
- **DBOM / DBFO** = Design-Build-Operate-Maintain phases are combined to the same long term agreement / private financing is combined to the DBOM-agreement, also known as PPP
- **Alliance, Integrated Project Team (IPT)** = Owner and one or more service providers (designer, constructor, supplier etc.) are working as an integrated project team
Applicability of Procurement Methods

Small Project size Huge

Constraints

Project Conditions

Leeway

DBB

CM

Alliance & IPT

DB

Point of Comparison

DBM
Traditional project delivery

- Lowest price
  - Confrontation
  - Extra works
  - Problems with time schedules
  - Owner and service providers do not have common goals
  - => Prerequisites for VfM do not exist

→ Low productivity
Integrated teams

- Integrated teams, integrated project delivery, project alliance
- Early Contractors involvement
  - Shared goals
  - Better supply chain management
  - Real possibilities for innovations
  - Enables better VfM approach in project management

=> Prerequisites for increasing productivity exists
Fore – method for cost estimation

- **Fore** is a service package designed to manage the costs of infrastructure projects over their entire life cycle.
- **Fore’s** tested cost assessment methods and updated price lists guarantee that you receive reliable and real-time information to help you make decisions.
- Among **Fore** users are The Finnish Transport Agency and biggest cities and consultancies in Finland.
- Provides tools and techniques for infrastructure cost management and control which are available for anyone
- Creates and provides information on infrastructure assets and projects
Structure of cost calculation

Logic of FORE Cost Database

End product element’s cost is based on the requirements

Circumstances
Environment
Built Environment
Special Requirements

End Product Element
End Product Element
End Product Element
End Product Element

Requirements

Feature 1
Feature 2
Feature 3
Feature 4

Unit
Work
Machine
Material

Resource Cost Data (Unit prices)

Continuous Testing with real projects
Price lists and structures in Fore system

"Entity / Project part price List"
Nomenclature list for entities and how to model building cost information for those

Product element structure
Which elements are included/modelled to the entities and what kind of quantities are used?

Building Element Price List
Unit prices for building elements.
Elements are listed according to nomenclature (Infra 2006)

Phase of Work / Production Structure
How the work is done? How much resources are needed?

Resource price list
Cost of labour, Machine work, Materials