Connecting Europe Facility 2014-2020

TRANSPORT CALLS FOR PROPOSALS 2014

APPLICATION FORM PART D

Technical and Financial Information

Title of the proposed action	The Planning of the Core Network Railway Corridors in Helsinki
Proposal number	Draft Nr: 26195427

1. GENERAL DESCRIPTION OF THE GLOBAL PROJECT INCLUDING NEEDS AND OBJECTIVES

The Global Project is the improvement of the Mediterranean–Scandinavian corridor in Finland. The Global Project in Helsinki is located in the node of two core network corridors: the Mediterranean–Scandinavian corridor and the North Sea–Baltic corridor, serving as a connection between Helsinki Airport and the centre of Helsinki and making the flow of passenger transport smoother to Helsinki's harbours. Helsinki is an initial point for several Corridor sections mentioned in *Annex I.2 to Regulation (EU) No 1316/2013*. It also links to the improvement of the section Helsinki–Oulu which is mentioned in the *Annex I.3 to Regulation (EU) No 1316/2013* as a section on the Core Network.

Scandinavian–Mediterranean Corridor starts at the Finnish–Russian border, and goes via Helsinki, Stockholm and Malmö to the European mainland and all the way to the Italy. It links the major urban centres and ports of Scandinavia and Northern Germany to continue to the industrialized high production centres of Southern Germany, Austria and Northern Italy further to the Italian ports and Valletta. The Finnish part of the core network corridor is multimodal network section which consists of roads, railways, ports, terminals, airports and Finnish-Russian border crossing. The Global Project is situated in the section which belongs to Helsinki–Turku and Helsinki–Vainikkala (Russian border) rail sections and links to Helsinki Airport-rail connection which are mentioned in the *Annex I.2 to Regulation (EU) No 1316/2013*.

Helsinki is the starting point of Baltic region–the North Sea corridor. The corridor connects Finland with Estonia by ferry, provide modern road and rail transport links between the three Baltic States on the one hand and Poland, Germany, the Netherlands and Belgium on the other.

The rail traffic arrangements in the Helsinki region (especially the way the railway yards are organised and the functionality of the Helsinki–Pasila rail section) are affecting the functionality of rail transport in Finland as a whole. These factors play a major role in Finland's long-distance transport and all local transport within the Helsinki region. Ongoing project The Ring Rail Line, scheduled to be opened in the summer of 2015, is part of the rail link between the airport and city centre of Helsinki. Thus the functionality of the two railway stations at Helsinki (Helsinki and Pasila) is the most important single crucial element of the Finnish TEN-T core networks. Proposed action consists of the improvement of the highly operated railway section between Helsinki and Pasila railway stations.

The two stations in Helsinki (Helsinki main railway station and Pasila station) and their railway yards are the most important nodal points of the Finnish TEN-T rail network. The stations in Helsinki provide interoperability between commuter and long-distance travelling and connect to Helsinki airport line as well. Also the rail freight traffic of the large ports of Vuosaari, Sköldvik and Hanko use the railway network into directions of Oulu, Turku and Lahti–Kouvola–Vainikkala–Russia. Improvement of this nodal point is essential as it affects reliability of the whole Finnish long-distance train traffic operations, as the timetables and transfer connections of the almost all long-distance traffic operations also elsewhere in Finland depend on the trains starting from Helsinki region.

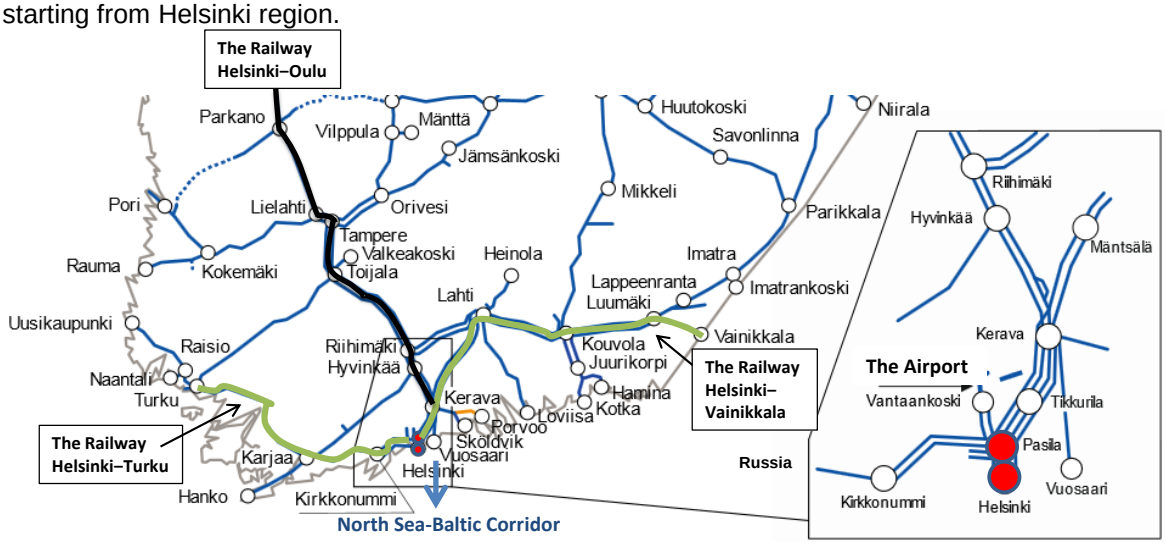


Figure 1. The Global Project (Scandinavian-Mediterranean Corridor in Finland; marked green) the Global Project section at Helsinki (marked red) and Helsinki–Oulu core network section (marked black).

The problems, needs and /or issues to be addressed by the Global Project

Traffic in Helsinki railway yard has increased 40 % in last 10 years. It has been estimated that the number of the inhabitants in Helsinki will increase 30 % by the year 2050. The infrastructure and structures of the Pasila district are strongly developing in the coming years. The city of Helsinki constructs a new city centre block (Tripla-project) to the area of the former railway yard in Pasila. Also a new station of Pasila will be constructed in the Tripla project along with a metro station and public transport terminal (trains, trams, busses). In ten years, there will be 20 000 new inhabitants and 50 000 new workplaces in Pasila. Increased number of passengers requires an efficient public transport system.

Traffic operations between Helsinki railway yard and Pasila railway yard will increase in the near future after the completion of the Airport Railway Line (Ring Rail) in 07/2015, and full capacity will be reached. The ongoing improvement of the Pasila–Riihimäki section will increase the number of trains even more.

Currently the section between Pasila and Helsinki railway yard is used by all long distance and commuter trains and the section and the railway yards are operating close to their capacity. According to the studies, the primary factors restricting the carrying capacity of the railway network in the entire southern Finland are the congestion of the Helsinki rail yard and the rather limited carrying capacity for long-distance traffic on the Helsinki–Pasila–Kerava section. It is not possible to increase the capacity of the train traffic using the current tracks and the existing railway yard arrangements. If no additional capacity between Helsinki and Pasila is built, number of train operations is at its maximum level and the punctuality and reliability of both long distance and commuter passenger train traffic will be lost.

The train operations are very sensitive to disturbances and any problems easily delay all long distance and commuter railway traffic using these core network railway sections. Severe delays for both long-distance and commuter traffic occur several times annually, when incidents take place or bad weather conditions realizes during winter times. The effectiveness of the railway system in Helsinki region is prerequisite of the competitiveness of Finland and the punctuality of the Finnish railway system as the distractions in Helsinki region reflects to whole country.

Helsinki is the departure or arrival stations of the most long-distance trains (70 %) in Finland and all commuter trains. All the trains stop also at Pasila. The distractions in Helsinki reflect and spread across the country and in the future also to the connection to Helsinki airport. Because the station is the railhead of the Finnish railway network, all local and long distance trains must change directions at the cramped railway yard of Helsinki. This makes congestion even worse. The congested railway yard significantly increases the sensitivity of railway traffic to disturbances.

The remote control system of the Helsinki railway yard was renewed in the spring of 2011. The new system is more automatic than before and it improved transmitting of the traffic information to the information system. Small improvements have been made in Helsinki rail yard along the years. However, the functionality of the whole system is not designed for current, and still increasing, number of trains. The interlocking system which directs the traffic of the railway yard of Helsinki has been in use since 1971.

The objectives, aim, timetable and costs of the Global Project

In order to secure effective long distance and commuter transport connections in the future, the railway network in the Helsinki region must be developed.The Global Project consists of the improvement of the Core Network Corridor at Helsinki which an initial point for several Corridor sections. The Global project consists of several projects:

Table 1. The timetable and costs of the Global Project

Project		Costs	Timetable
The Helsinki Rail Loop (in Helsinki)		956 M€	2015–2022
The improvement of the railway yard of Helsinki	1st phase	60 M€	2016–2020
	2nd phase	90 M€	2025–
The additional track of Pasila station (in Helsinki)		31,1 M€	2015–2019
Helsinki–Turku railway (section Espoo-Lohja-Salo)		1500 M€	2025–
Helsinki–Turku railway (section Espoo)	1st phase	224 M€	2020–
	2nd phase	66 M€	2025–

The main target is to improve the operational facilities of Helsinki so that it can fulfil the punctuality and reliability requirements of the rail services in the whole country. The development of Global Project aims to improve the competitiveness of railways by reducing the journey length and time and ensuring sufficient capacity and service level. The planned impact will increase the competitiveness of sustainable transport modes in the national transport system, by transferring passenger transport flows from road to rail. The project will reduce the need for bus and car traffic along with associated environmental impacts and thus promote the EU's climate policy objectives. The project will also contribute to increasing the overall reliability of the passenger transport services by decreasing the distractions and delays of the traffic. After completing

the section, the fluency, capacity and the service level of the train traffic improves.

The current state of play, results and/or objectives achieved so far and timetable

The Helsinki Rail Loop*; (the Construction plan of the Helsinki Rail Loop is part of the proposed Action)*

The Helsinki Rail Loop is a new underground double-track rail line beneath Helsinki city centre. The loop-shaped railway starts in Pasila and the trains will run in two parallel tunnels. The length of the Helsinki Rail Loop is 8 km of which 6 km is an underground double-track railway. The Helsinki Rail Loop will have three underground railway stations: Töölö, City Centre and Hakaniemi. The estimated passenger volume for the three new stations along the Helsinki Rail Loop in 2025 is approximately 160,000 users per weekday.

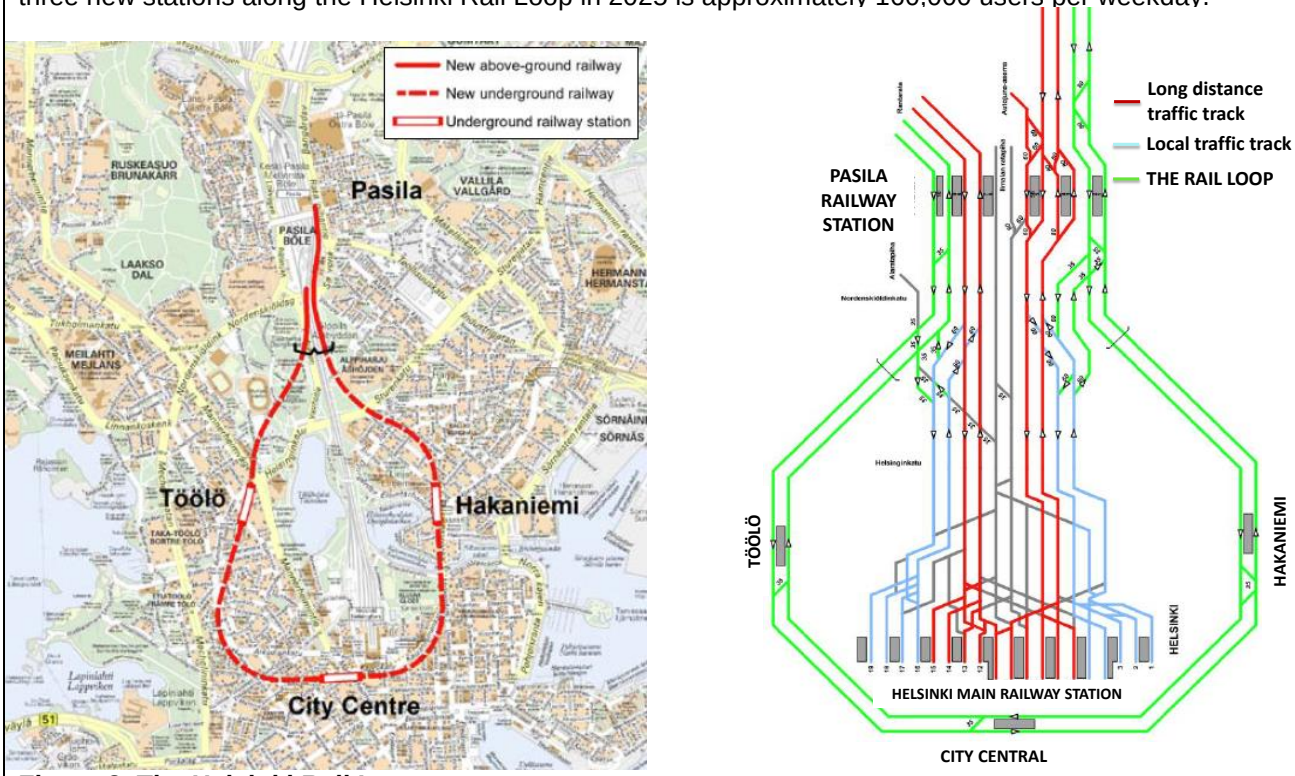


Figure 2. The Helsinki Rail Loop.

The Helsinki Rail Loop increases the capacity and reliability of the train traffic by allowing commuter train operations to use the new loop link instead of changing the direction of the train in the congested railway yard of Helsinki which is the railhead of the Finnish railway network. The track section is specially designated for trains running to and from these directions without using the congested overground Helsinki Central Railway Station as their end station. It is estimated that after implementing the Helsinki Rail Loop, 70 % of the traffic decreases in the railway yard of Helsinki. This relief capacity for the long distance trains and makes the train traffic management more efficient.

The construction of the Helsinki Rail Loop will expand the service area of Helsinki's public rail system, making the city centre more accessible. The Helsinki Rail Loop will boost passenger rail traffic, speed up public transport, alleviates train delays and improves the trip convenience and operational reliability of railway traffic. The long distance passenger will have shorter travel times and they will be able to travel closer to their destination in the centre of Helsinki. The Helsinki Rail Loop will bring more public transport users and speed up public transport journeys in the Greater Helsinki Area. The speed of the train will be 80 km/h. Loop time from Pasila to Pasila will be 12 minutes. Trains will operate at five minutes intervals in both directions.

The General Plan and EIA was made in 2011 and accepted in 2012. The Railway plan will be completed in 12/2014 and finalized in 04/2015. The Railway plan will be accepted after the City Plan has been accepted. The construction plan phase began in 1/2015. The construction work of the Helsinki Rail Loop can begin earliest in 2016. The estimated construction period for the Helsinki Rail Loop is seven years.

The improving of the Helsinki railway yard; *the Construction plan is part of the proposed Action*

The project consists of several measures. The functionality and the capacity of the railway yard will be improved by increasing the number of the railway signals, switches and switch lanes, by modernizing the safety devices and by making the train operations more effective. The work will be implemented in four phases (1st J / 2nd ABI / 3rd CDEF / 4th GH). See figure below.

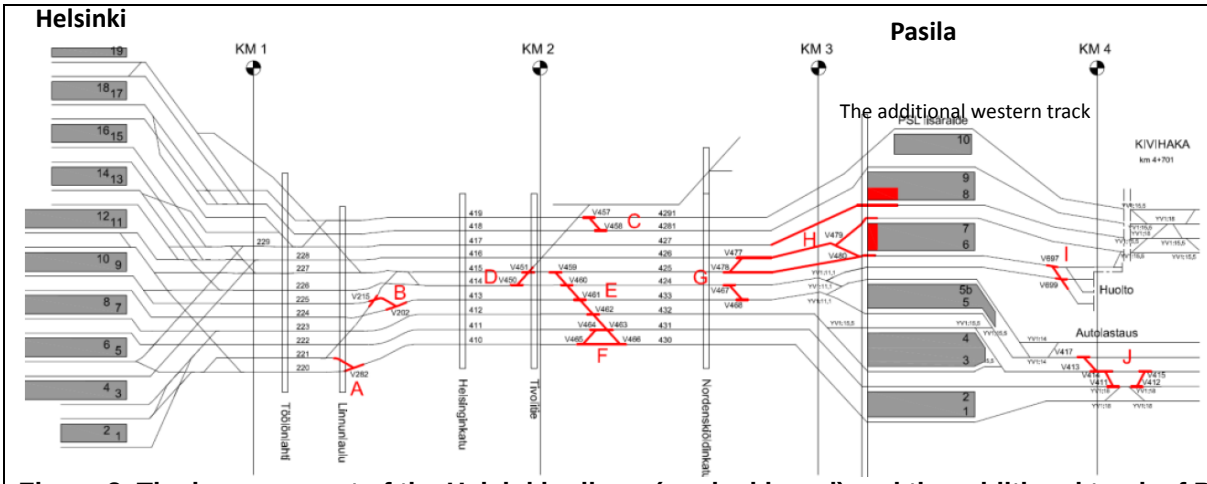


Figure 3. The improvement of the Helsinki railway (marked in red) and the additional track of Pasila.

The tracks between Helsinki and Pasila have been divided into line sections. Only one train can operate in one line section of a track at time. The proceedings of the trains from the section to another are managed by using signals (traffic lights). To reduce the waiting time, four new signals will be constructed between Helsinki and Pasila. By increasing the number of signals, one train reserves shorter track section at time, which means that more trains can operate in one track at the same time.

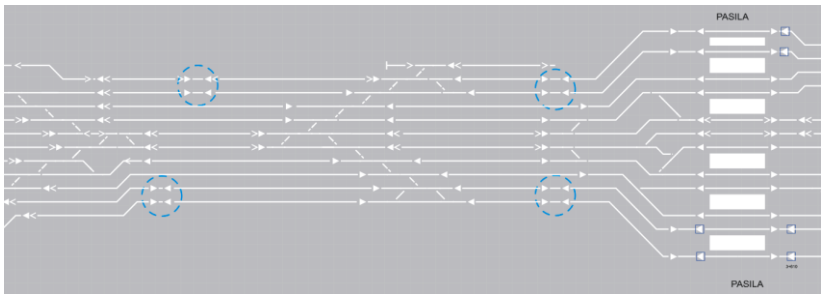


Figure 4. New signals (marked in circles)

The improvement of the Helsinki railway yard improves capacity and sensibility to distractions. After implementing the project it is possible to increase the number of trains operated in the railway yard and the trains can also be operated in a tighter schedule. The disturbances of the railway traffic in area of Helsinki decreases as the number of the alternative routes used increases. It also speeds up maintenance measures when the faults can be located faster and reduces the disturbances of the traffic caused by the maintenance measures which take place on the railway yard.

Currently it is possible to operate 74 trains / hour between Helsinki and Pasila. After implementation of the project, it is possible to operate even 90 trains / hour (200 more operated trains / day). The Action reduces the disturbances of the railway traffic in area of Helsinki as the number of the alternative routes used by the long-distance traffic increases. If there are distractions, it also speeds up maintenance measures when the faults can be located faster and reduces the disturbances of the traffic caused by the maintenance measures which take place on the railway yard.

The train operation module will be planned in 2011–2012. Pre-study and modeling was made according to the train operation module in 2013 and the improvement plan in 02/2015. The Plan will not be given to the administrative procedure as the planning has been done within an existing railway yard area and not therefore the official acceptance is not needed. The Railway Plan is not needed either. The construction planning will made in 2015–2018.

The additional track of Pasila*; the Construction plan of the 2nd phase is part of the proposed Action*
The infrastructure and structures of the Pasila district are strongly developing in the coming years. The city of Helsinki constructs a new city centre block and terminal (Tripla project) to the area of the former railway yard in Pasila. The old station will be demolished. The Tripla-project is not part of the Global Action.

Building a new terminal upon the railway bridge requires improvement and enlargement of the current railway bridge of Pasila. To improve to capacity an additional track will be built underneath the railway bridge of Pasila. Construction of the new track also requires bridge alteration works.

The project “the additional track of Pasila” includes construction of the new additional track (1,5 km) and platform, and improvement of the track arrangements in the Pasila station in 2015–2019. Two railway bridges will be widened, four new bridges constructed and the northern underpass bridge lengthened. The work will be done in two phases. The Construction Plan of the 1st construction phase will be made in 2015 (2013-FI-12010-S) and the Construction plan of the 2nd phase is part of the proposed Action.

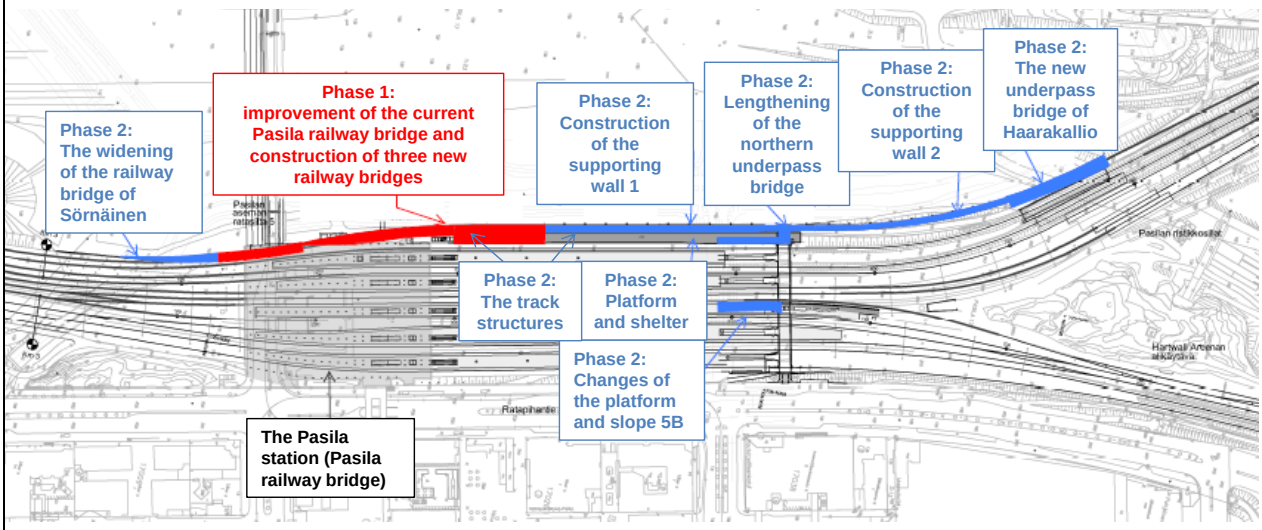


Figure 5. The construction of the additional track (1st and 2nd phase).

The new city centre of Central-Pasila, the Tripla project, is taken into account in the planning and construction of the additional track because the projects have shared structures. The foundations of the new terminal (the railway bridge of Pasila) and some other railway bridges have to be planned and constructed first so that construction of the Tripla project and transport terminal can proceed.

The new track improves the capacity and decreases the distractions and delays of the passenger and freight train traffic of the whole country. After implementing the project it is possible to increase the number of trains. This improvement will also enable the construction of the new city centre block of Center-Pasila and a new transport terminal (not part of the Global Project).

The preliminary plan was completed in 2010. The General Plan and EIA were not necessary for the project but unofficial General Plan was nevertheless made in 2011. The Railway Plan was completed in 2014 and it will be accepted by 12/2015. The Construction Plan of the 1st construction phase will be made in 2015 (2013-FI-12010-S). The Construction Plan of the 2nd phase (part of the proposed action) will be done in 1.5.2015–30.06.2016 and defined in 1.7.2016–31.12.2016. The construction can begin in 2015 during the construction planning phase. Construction will be completed in 2019. The new public transport terminal and the city centre block of Central-Pasila will be completed in 2020.

Helsinki–Turku railway; *not part of the proposed Action*
The coastal line (Helsinki–Turku line) is a major passenger connection for long-distance traffic. The present railway section in Espoo (Leppävaara–Kauklahti) forms an important part of the coastal line. The improvement of this section is the first phase of the improvement of the Helsinki–Turku line. The objectives of the line extension are to increase train connections in commuter and long-distance traffic, to improve rail traffic punctuality by reducing its vulnerability to disturbances, and to improve the attractiveness of public transport. The construction of two additional tracks would enable the use of separate tracks in both directions in both commuter and long-distance traffic. The preliminary General Plan of Espoo–Lohja–Salo and EIA was completed in 2010. The General Plan of Espoo–Kauklahti was completed in 2011 and the Railway Plan in 2014.

The main stakeholders of the Global Action are

- The Finnish Transport Agency (FTA); implementing body, financier and acceptor of the plan
- Ministry of Transport and Communications; allocates national financing
- Finnish Transport Safety Agency; implementation permits
- VR; traffic contractor
- Helsinki Region Transport, passenger train traffic
- City of Helsinki; partner, financier, beneficiary, City and town planning, land use
- Helsinki–Uusimaa Regional Council and the Regional Council of Häme; Provincial planning
- National Board of Antiquities of Finland; Archeology

- Helsinki Region Environmental Services Authority HSY
- YIT, Senaatti-Kiinteistöt; construction of the Keski-Pasila city centre block
- The Centres for Economic Development, Transport and the Environment (ELY Centres) in Uusimaa; environment and nature resources.
- Rescue department of Helsinki; rescue plans
- Passengers, the traffic system of Finland; beneficiaries

Other parts of the Global Project that are planned to be implemented in parallel
The proposed Action consists of the Construction Plans of the Helsinki Rail Loop, the Helsinki railway yard and the additional western track of Pasila (2nd phase). The planning of the additional western track 1st phase will be completed in 2015 and the construction of the western track 1st phase begins in also in 2015. The construction of the 2nd phase begins in 2016. The construction of the Helsinki Rail Loop and the improvement of the Helsinki railway yard have been planned to do in parallel with the Proposed Action.

2. DESCRIPTION OF THE PROPOSED ACTION

2.1. General description of the proposed Action including needs and objectives

The objective of the Proposed Action
The Proposed Action "The Planning of the Core Network Railway Corridors in Helsinki" includes Construction Plans of the Helsinki Rail Loop, the Helsinki railway yard and the additional track of Pasila. For the current state of play, problems and needs, see *1 General Description of the Global Project.*

The objective of the Action is a completion of studies. The objective of the studies is to provide maturity for construction and for proceeding to the actual implementation phase as technical details, reliable cost estimates, impacts and realization possibilities can be estimated precisely. Proceeding to the construction phase requires the construction plan. The construction can partially begin already in the construction planning phase. The Action is scheduled 19.12.2014–31.12.2018 and the cost estimate is 32,61 M€. If the proposed Action is supported by the Commission and selected to perform an ex-post climate change impact assessment of the action, this will be done.

The specific problems, needs and issues to be addressed by the Action
See *1 General Description of the Global Project.*

Expected results and indicators
The expected results are completed Construction Plans of the Helsinki Rail Loop, the Helsinki railway yard and the additional track of Pasila. Completed studies will be used as indicators.

The Proposed Action
The Proposed Action "The Construction Plan of the Helsinki Rail Loop" (activities 1-6)
The Construction Plan of the Helsinki Rail Loop includes the planning of a track line of 8 km (of which 6 km is an underground double-track railway) and three underground railway stations; Töölö, City Centre and Hakaniemi (see figure below). Also an emergency and maintenance tunnels will be planned. The Construction Plan also includes planning of the two areas (area 1 and 2) which are located at the end of tunnel sections as the construction of tunnel demands traffic arrangements outside of the tunnel (for example planning of the 150 m and 50 m bridges and duct transfers). The planning phase also includes the project management and demanded geological investigations. Activities are scheduled in 2015–2017 and the cost estimate is 24,31 M€.

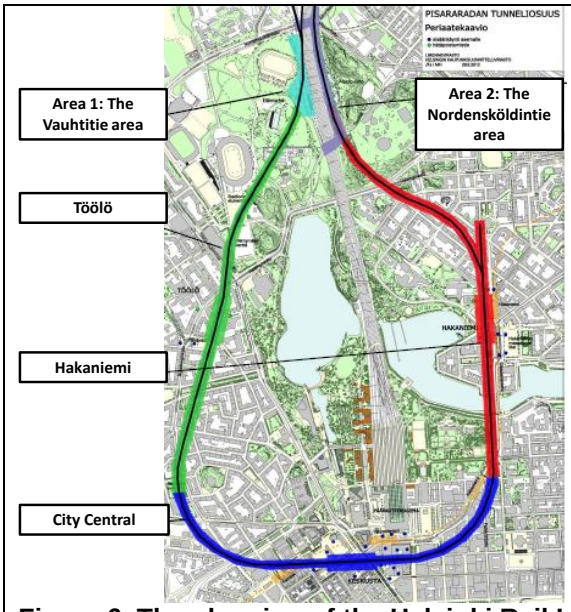


Figure 6. The planning of the Helsinki Rail Loop.

The Railway Plan (Action 2011-FI-93125-S; 13.4.2012–31.12.2014) was made in 2012–31.12.2014 and the plan will be finalized in 1.1.2015–30.4.2015. The Railway Plan was more elaborate and extensive than Railway Plans usually. It included studies which could as well as be part of the Construction Plan as it was important to assure the cost estimate and the chosen alternatives as this information was demanded in the City Planning process of Helsinki. All the contracts concerning planning were made in the Railway planning phase. The contracts also include the Construction planning phase and even an option for the construction time planning until 2022. The cost concerning the finalizing of the Railway Plan in 1.1.2015–30.4.2015 will be separated from the costs and these costs are not included in this application.

The Proposed Action "The Construction Plan of the Helsinki railway yard" (activity 7)
The Construction Plan of the Helsinki railway yard includes three construction plans. The functionality and the capacity of the railway yard will be improved by increasing the number of the railway signals, switches and switch lanes, by modernizing the safety devices and by making the train operations more effective. The construction planning includes planning of the switches, signals and safety device and electrified track works and coordination with the additional track of Pasila. The planning phase also includes the project management and demanded geological investigations. The activity is scheduled in 1.8.2015–31.12.2018. The cost estimate is 6 M€. For the current state of play, see *1 General Description of the Global Project*

The Proposed Action "Construction Plan of the additional track of Pasila 2nd phase" (activity 8)
The Construction Plan of the planning of the 2nd phase works (construction of the additional western track and platform, bridge works and track arrangements). The activity is scheduled in 19.12.2014–31.12.2016. The cost estimate is 2,3 M€. The Construction Plan includes track planning, geotechnical planning, bridge and structure planning, safety device planning, electrified track and power engineering, station arrangements, phasing of the work and assessment of the environmental effects, risks and effects of the project. It also includes cost estimates and documentation. The planning of the track, electrified track and safety devices of the 1st and 2nd phase is done during this Activity. The Construction Plan of the planning of the 1st phase works is ongoing. The new city centre of Central-Pasila, the Tripla project, is taken into account in the planning and construction of the additional track because the projects have shared structures.

The justification for EU support
The section is operated at its capacity and even the maintaining of the competitiveness of the traffic requires immediate improvements. The Action removes these bottlenecks and bridges a missing link. The needed financing resources of the Global Project are not yet fully available, which will lead to a slow development of capacity to the set target level. If the implementation is delayed to a long extent, it will cause severe problems for railway operations. Described action is of vital importance for smooth traffic flows along the entire axis and would, if not completed within the agreed period time, reduce the benefits drawn from investments made on other sections of the axis. The EU support enables that the implementation of Global Project continues and existing project organization and site activities can continue working efficiently. At the current financial situation, the yearly budget allocation is quite low. The EU support would boost the implementation of the Action and the Global project. Links with specific policy and priority objectives, see 3.2 - 3.4.

2.2. Contribution of the proposed Action to the Global Project and expected results

The objective of the studies is to provide maturity for decision making and for proceeding to the actual implementation phase as technical details, reliable cost estimates, impacts and realization possibilities can be estimated precisely. The planning phase is a requirement for the implementation. The next phase of the Global Project is the construction of the Helsinki Rail Loop and the additional track and improvement Helsinki railway. After the Action the Global project is closer to implementation and the objectives of the global project can be achieved.

2.3. Description of the Activities of the proposed Action (including their interdependencies)

Activity 1: The Construction Plan of the Helsinki Rail Loop: The Project management

The Activity includes the project management of the construction planning (services of the developer consultant, communications consultant, risk management and Independent Safety Assessor –consultants and other expert tasks, Building Information Model and the costs of the project office etc). The activity is scheduled in 1.1.2015–30.6.2017. The cost estimate is 3,01 m€.

The Activity

The Activity includes project management of the construction planning phase. The developer consultant assists and works as an expert for the client (The Finnish Transport Agency) during the construction planning phase 1.1.2015–30.6.2017. The developer consultant for example assists in follow up of the cost, supervision of the planning and in the preparation of the administrative documents. The costs of the project office include for example the rent, electricity and services (maintenance, security, cleaning, copying).

The risk management consultant draws up a risk management plan, organizes the risk management of the planning, evaluates the impact of the risks and reports to the project organization. The services of the communications consultant include communications planning and contacts with the media, stakeholders and public. The communications consultant also assists in the arranging of the public events. The consultant service concerning the Building Information Model (BIM) includes for example assisting of the client, source information models and upkeep of the system.

Expected results

The expected result is well-managed planning project (duration of 30 months) of the Helsinki Rail Loop. The Activity contributes to the achievement of the objectives of the proposed Action as it supports the realization of the planning phase and the completed study provides maturity for the decision-making for development consents.

Acceptance procedure

The planning process will be constantly monitored by the developer consultant. All the Construction Plans (activities 2-6) will be accepted separately. The plan will be also evaluated by the Independent Safety Assessor (ISA) -consultant in order to confirm that the plan qualify for requirements. The project manager of the Finnish Transport Agency (FTA) is responsible for the project. In acceptance inspection of the FTA, the work is received and made sure that it has been well done.

Stakeholders

The stakeholders are the Finnish Transport Agency (implementing body, financier and acceptor of the plan), the City of Helsinki (beneficiary, financier, City and town planning, land use), Helsinki Region Transport (commuter passenger traffic) and the owners of the properties of the planning area.

Milestones (the Critical Path, see 2.5.)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 10. The geological investigations completed 31.12.2016 (Inspection report signed by the FTA)
- Milestone 11. All the Construction Plans completed 30.6.2017 (acceptance and final financial review of activities 2–5 signed by FTA).

Activity 2: The Construction Plan of the Helsinki Rail Loop: Töölö

The activity includes construction planning of the underground station of Töölö, 2 km of track lines and Area 1 (Vauhtitie). The activity is scheduled in 1.1.2015–30.6.2017. The cost estimate is 3,14 m€.

The Activity

The Activity includes construction planning of the underground railway station of Töölö, 2 km of track line in two parallel tunnels in Töölö section and emergency / maintenance / working tunnel of 2-3 km (see figure below). Construction planning consists of the architectural planning, structural planning and rock and geotechnical planning. The structures of the station and the needed functions and access of the passengers are being planned in the Activity.

The Activity also includes planning of the Vauhtitie (Area 1 “Vauhti street”) area at end of the tunnel section (for example 150 m bridge and other traffic arrangements). All the planning contracts have already been signed.

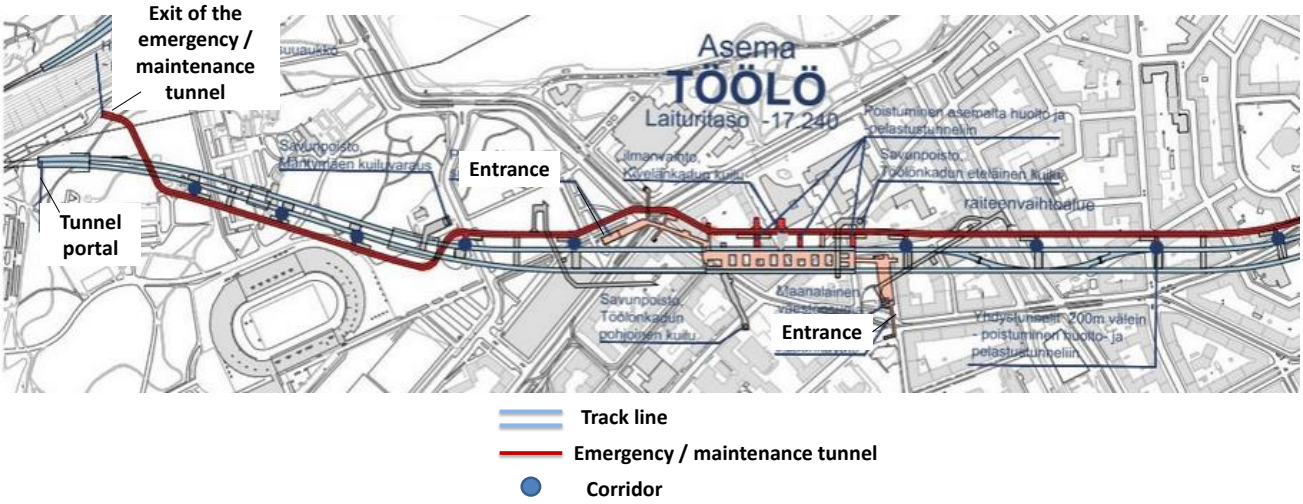


Figure 7. The Töölö section and station.

Expected results

The expected result of the Activity 2 is a completed Construction Plan of the Töölö section and Area 1. The Activity contributes to the objectives of the Action as the completed study provides maturity for the implementation phase.

Acceptance procedure (stakeholders, see activity 1)

The developer consultant supervises the proceeding of the planning work. The Construction Plan will be delivered to FTA 30.10.2016 for the inspection of the Finnish Transport Agency (FTA) and the plan will be finalized after that. The plan will be accepted by the FTA. There is no administrative acceptance process.

Milestones (the Critical Path, see 2.5.)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 2. The Construction Plan of Töölö delivered to FTA 31.10.2016 (plan delivered to FTA)
- Milestone 3. The Construction Plan of Töölö completed 30.6.2017 (acceptance and final financial review signed by FTA)

Activity 3: The Construction Plan of the Helsinki Rail Loop: The City Centre

The activity includes construction planning of the underground station of City Centre and 2 km of track line. The activity is scheduled in 1.1.2015–30.6.2017. The cost estimate is 4,59 m€.

The Activity

The Activity includes construction planning of the underground railway station of City Centre, 2 km of track line in two parallel tunnels in City Centre section and emergency / maintenance tunnel (see figure below). Construction planning consists of the architectural planning, structural planning and rock and geotechnical planning. The structures of the station and the needed functions and access of the passengers are being planned in the Activity. All the planning contracts have already been signed.

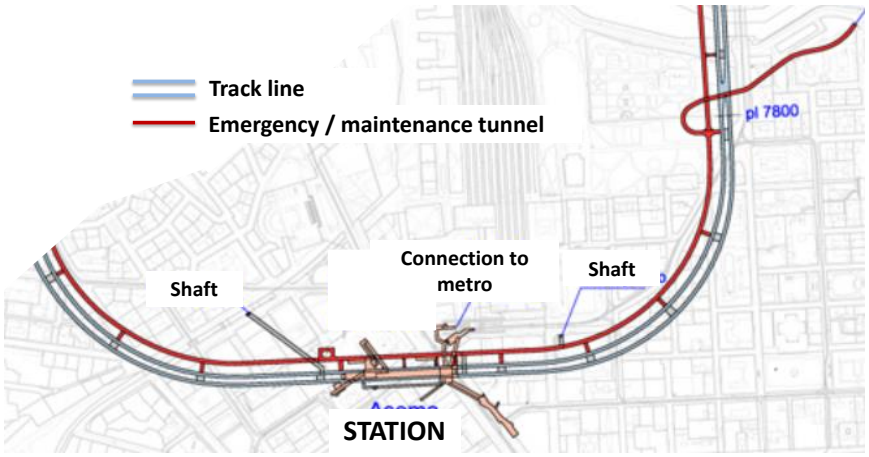


Figure 8. The City Centre section and station.

Expected results

The expected result of the Activity 3 is a completed Construction plan the City Centre section. The Action contributes to the objectives of the Action as the completed study provides maturity for the implementation phase.

Acceptance procedure (stakeholders, see activity 1)

The developer consultant supervises the proceeding of the planning work. The Construction Plan will be delivered to FTA 30.10.2016 for the inspection of the Finnish Transport Agency (FTA) and the plan will be finalized after that. The plan will be accepted by the FTA. There is no administrative acceptance process.

Milestones (the Critical Path, see 2.5.)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA) Milestone 4. The Construction Plans of City Centre delivered to FTA 31.10.2016 (plan delivered to FTA)
- Milestone 5. The Construction Plan of City Centre completed 30.6.2017 (acceptance and final financial review signed by FTA)

Activity 4: The Construction Plan of the Helsinki Rail Loop: Hakaniemi

The activity includes construction planning of the underground station of Hakaniemi, 2 km of track lines and Area 2 (Nordensköldintie). The activity is scheduled in 1.1.2015–30.6.2017. The cost estimate is 2,81 m€.

The Activity

The Activity includes construction planning of the underground railway station of Hakaniemi, 2 km of track line in two parallel tunnels in Hakaniemi section and emergency tunnel and maintenance / working tunnel (see figure 3).Construction planning consists of the architectural planning, structural planning and rock and geotechnical planning. The structures of the station and the needed functions and access of the passengers are being planned in the Activity.

The Activity also includes planning of the Nordensköldintie (Area 2 "Nordensköld Street") area at end of the tunnel section (50 m bridge and traffic arrangements). All the planning contracts have already been signed.

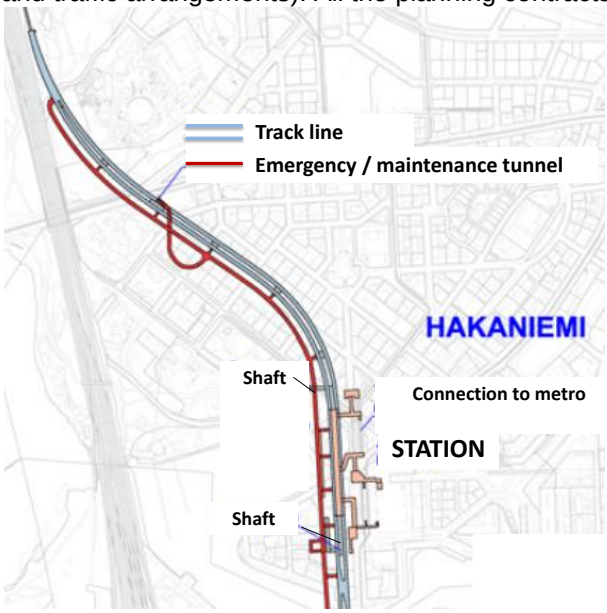


Figure 9. The Hakaniemi section and station.

Expected results

The expected result of the Activity 4 is a completed Construction Plan the Hakaniemi section and Area 2. The Activity contributes to the objectives of the Action as the completed study provides maturity for the implementation phase.

Acceptance procedure (stakeholders, see activity 1)

The developer consultant supervises the proceeding of the planning work. The Construction Plan will be delivered to FTA 30.10.2016 for the inspection of the Finnish Transport Agency (FTA) and the plan will be finalized after that. The plan will be accepted by the FTA. There is no administrative acceptance process.

Milestones (the Critical Path, see 2.5.)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 6. The Construction Plans of Hakaniemi delivered to FTA 31.10.2016 (plan delivered to FTA)
- Milestone 7. The Construction Plan of Hakaniemi completed 30.6.2017 (acceptance and final financial review signed by FTA)

Activity 5: The Construction Plan of the Helsinki Rail Loop: Technical track and special field planning

The activity includes technical track planning and special field planning (safety devices, electrified track, HPAC, duct transfer etc). The activity is scheduled in 1.1.2015–30.6.2017. The cost estimate is 7,8 m€.

The Activity

The Activity includes technical track planning; planning of the track, electrified track, traffic management and safety devices. The Activity also includes special field planning; planning of the building services engineering (electricity and automation and heating, plumbing, air-conditioning), street, traffic and environmental, fire technical, radio networks, noise and duct transfer.

Expected results

The expected result of the Activity 5 is a completed Construction Plans of technical track and special field planning (as safety devices, electrified track, HPAC, duct transfer etc). The Action contributes to the objectives of the Action as the completed study provides maturity for the implementation phase.

Acceptance procedure (stakeholders, see activity 1)

The developer consultant supervises the proceeding of the planning work. The Construction Plans will be delivered to FTA 30.10.2016 for the inspection of the Finnish Transport Agency (FTA) and the plan will be finalized after that. The plan will be accepted by the FTA. There is no administrative acceptance process.

Milestones (the Critical Path, see 2.5.)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 8. The Construction Plans of technical track and special field planning delivered to FTA 31.10.2016 (plan delivered to FTA)
- Milestone 9. The Construction Plan of technical track and special field planning completed 30.6.2017 (acceptance and final financial /technical review signed by FTA)

Activity 6: The Construction Plan of the Helsinki Rail Loop: The geological investigations

The activity includes the geological investigations. The activity is scheduled in 1.1.2015–31.12.2016. The cost estimate is 2,96 m€.

The Activity

The geological investigations include for example rock and soil samples and geographical measurements. The activity also includes traffic arrangements needed during the investigations and the monitoring of ground water levels.

Expected results

The planning solutions are ensured, and the height position and quality of the rock surface are determined. The measurements produce information about the current geographical structures.

Acceptance procedure (stakeholders, see activity 1)

The developer consultant supervises the proceeding of the geological investigations. The geological investigations will be accepted by the Finnish Transport Agency (FTA). There is no administrative acceptance process.

Milestones (the Critical Path, see 2.5.)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 10. The geological investigations completed 31.12.2016 (Inspection report signed by the FTA)

Activity 7: The Construction planning of the Helsinki railway yard

The Activity includes construction plans, supplementary studies (for example geological investigations and measurements of the track) and project management of the Helsinki railway yard planning phase. The activity is scheduled in 1.8.2015–31.12.2018. The cost estimate is 6 M€.

The Activity

The functionality and the capacity of the railway yard will be improved by increasing the number of the railway signals, switches and switch lanes, by modernizing the safety devices and by making the train operations more effective. The construction project will be divided in four phases which will be also planned in phases. The Activity includes three of these plans (ABI, CDEF and GH; see figure 3). The 1st phase (J) has already been planned.

- The 2nd phase (ABI) includes planning of the installation of five new switches and planning of the safety device and electrified track works in 8/2015–6/2016.
- The 3rd phase (CDEF) includes planning of the installation 12 new switches, four new signals and planning of the safety device and electrified track works in 8/2015–5/2017.
- The 4th phase (GH) includes planning of the installation six new switches, coordination with the additional track of Pasila (act 8) and planning of the safety device and electrified track works in 2/2017–10/2018.

The developer consultants assist the client (FTA) in the project management (for example managing of the procurements, cost and timetable follow-up) in 8/2015–8/2018. The results of the plan ABI will be evaluated by outside inspection consultants. The results of the plans of CDEF and GH will be evaluated by the developer consultant.

The Activity also includes geological investigations and contaminated soil research in 2015. These investigations done especially where the switches are located. The geographic coordinate system changed in the beginning of 2013, so the tracks will be measured again for the elevation model in order to ensure the compatibility of the plans.

Expected results

The expected result is a completed construction plans of the phases 2 to 4. The Activity contributes to the objectives of the Action as the completed study provides maturity for the implementation phase.

The acceptance procedure

The developer and inspection consultants supervise proceeding of the work constantly and accept the completed plans. The plans will be evaluated by the Independent Safety Assessor (ISA) –consultant in order to confirm that plans qualify for requirements. (It is possible that the work will be evaluated by the Notified Body in order to confirm that the work quality for requirements.) The Finnish Transport Agency (FTA) accepts the plan (final financial review). There is no administrative acceptance process.

The stakeholders

The stakeholders are The Finnish Transport Agency (implementing body, financier and acceptor of the plan), developer consultant (assists the FTA in the project management) and the City of Helsinki (beneficiaries, City and town planning, land use).

Milestones (the Critical Path, see 2.5.)

- Milestone 12. The contract of 2nd phase (ABI) 15.8.2015 (signed contract)
- Milestone 13. The Construction Plan of 2nd phase (ABI) completed 30.9.2016 (acceptance and final financial review signed by FTA)
- Milestone 14. The Construction Plan of 3rd phase (CDEF) completed 31.8.2017 (acceptance and final financial review signed by FTA)
- Milestone 15. The Construction Plan 4th phase (GH) completed 31.12.2018 (acceptance and final financial review signed by FTA)

Activity 8: The Construction Plan of the additional track of Pasila 2nd phase

The Activity includes the Construction Plan of the additional western track and track arrangements (2nd phase). The activity is scheduled in 19.12.2014–31.12.2016. The cost estimate is 2,3 M€.

The Activity

The Activity includes the Construction Plan of the 2nd phase works (see figure 4). The 2nd phase includes planning of the new additional track of 1,5 km and new platform, the widening of the railway bridge of Sörnäinen (length of 80 m, width at maximum 3,2 m), lengthening of the northern underpass bridge (10 metres) and new pedestrian underpass bridge of Haarakallio (length of 75 m, width at maximum 7,2 m).

The Construction Plan includes track planning, geotechnical planning, bridge and structure planning, safety device planning, electrified track and power engineering, station arrangements, phasing of the work and assessment of the environmental effects, risks and effects of the project. It also includes cost estimates and documentation. The planning of the track, electrified track and safety devices of the 1st and 2nd phase is done during this Activity. The plan will be made in 1.5.2015–30.06.2016 and defined by 31.12.2016.

The Activity also includes planning of the technical room and systems in 19.12.2014–31.12.2015.

Expected results

The expected result of the Activity 8 is a completed construction plans of the additional western track of Pasila 2nd phase. The Activity contributes to the objectives of the Action as the completed study provides maturity for the implementation phase.

Acceptance procedure

The planning process will be constantly monitored by the developer consultant. The project manager of the Finnish Transport Agency (FTA) is responsible for the project. The plan will be approved by the FTA. There is no administrative acceptance procedure. The plan will be evaluated by the Independent Safety Assessor (ISA) and Notified Body -consultants in order to confirm that the plan qualify for requirements.

The stakeholders

The stakeholders are The Finnish Transport Agency (implementing body, financier and acceptor of the plan), the City of Helsinki (partner, beneficiary, City and town planning, land use), VR (traffic contractor), Helsinki Region Transport (commuter passenger traffic) and YIT (contractor).

Milestones (the Critical Path, see 2.5.)

- Milestone 16. The contract of the main planning of the technical room and systems signed 19.12.2014 (signed contract)
- Milestone 17. The contract for the construction plan of the 2nd phase signed 1.6.2015 (signed contract)
- Milestone 18. The construction plan of the 2nd phase completed 31.12.2016 (inspection report signed by the FTA)

2.4. Location of the proposed Action

Annex 12. Map.
Annex 13. GIS files.

2.5. Action Plan (graphic representations)

Please provide a Gantt chart detailing the critical path and including the milestones of the proposed Action and their interdependencies.

Activity 1 proceeds alongside the planning process (activities 2–5). The results of the Activity 6 are taken into account in the activities 2-5. Activities 2-5 and 7-8 are not on a Critical Path.

	2014			2015											2016												2017												2018											
	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	#	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Activity 1.				1																						10						11																	
Activity 2.				1																					2						3																	
Activity 3.				1																					4						5																	
Activity 4.				1																					6						7																	
Activity 5.				1																					8						9																	
Activity 6.				1																						10																							
Activity 7.											12														13												14											15
Activity 8.			16								17															18																							

Activity 1: The Construction Plan of the Helsinki Rail Loop: The Project management (1.1.2015–30.6.2017)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 10. The geological investigations completed 31.12.2016 (Inspection report signed by the FTA)
- Milestone 11. All the Construction Plans completed 30.6.2017 (acceptance and final financial review of activities 2–5 signed by FTA).

Activity 2: The Construction Plan of the Helsinki Rail Loop: Töölö (1.1.2015–30.6.2017)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 2. The Construction Plan of Töölö delivered to FTA 31.10.2016 (plan delivered to FTA)
- Milestone 3. The Construction Plan of Töölö completed 30.6.2017 (acceptance and final financial review signed by FTA)

Activity 3: The Construction Plan of the Helsinki Rail Loop: The City Centre (1.1.2015–30.6.2017)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 4. The Construction Plan of City Centre delivered to FTA 31.10.2016 (plan delivered to FTA)
- Milestone 5. The Construction Plan of City Centre completed 30.6.2017 (acceptance and final financial review signed by FTA)

Activity 4: The Construction Plan of the Helsinki Rail Loop: Hakaniemi (1.1.2015–30.6.2017)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 6. The Construction Plan of Hakaniemi delivered to FTA 31.10.2016 (plan delivered to FTA)
- Milestone 7. The Construction Plan of Hakaniemi completed 30.6.2017 (acceptance and final financial review signed by FTA)

Activity 5: The Construction Plan of the Helsinki Rail Loop: Technical track and special field planning (1.1.2015–30.6.2017)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 8. The Construction Plans of technical track and special field planning delivered to FTA 31.10.2016 (plan delivered to FTA)
- Milestone 9. The Construction Plan of technical track and special field planning completed 30.6.2017 (acceptance and final financial /technical review signed by FTA)

Activity 6: The Construction Plan of the Helsinki Rail Loop: The geological investigations (1.1.2015–31.12.2016)

- Milestone 1. The meeting of the steering group 12.2.2015 (minutes of the meeting signed by FTA)
- Milestone 10. The geological investigations completed 31.12.2016 (Inspection report signed by the FTA)

Activity 7: The Construction planning of the Helsinki railway yard (15.8.2015–31.12.2018)

- Milestone 12. The contract of 2nd phase (ABI) 15.8.2015 (signed contract)
- Milestone 13. The Construction Plan of 2nd phase (ABI) completed 30.9.2016 (acceptance and final financial review signed by FTA)
- Milestone 14. The Construction Plan of 3rd phase (CDEF) completed 31.8.2017 (acceptance and final financial review signed by FTA)
- Milestone 15. The Construction Plan 4th phase (GH) completed 31.12.2018 (acceptance and final financial review signed by FTA)

Activity 8: Construction Plan of the additional track of Pasila 2nd phase (19.12.2014–31.12.2016)

- Milestone 16. The contract of the main planning of the technical room and systems signed 19.12.2014
- Milestone 17. The contract for the construction plan of the 2nd phase signed 1.6.2015
- Milestone 18. The construction plan of the 2nd phase completed 31.12.2016 (inspection report signed by the FTA)

2.6 Risk Assessment Grid by activities

Activity N°	Risk	Impact	Likelihood	Control	Mitigating measure(s)
1	Lack of resources, replacement or sickness of key persons	Moderate (delays)	Moderate	Under	Keeping debuties updated
2-6	Incorrect source information or incorrect conclusions	Moderate (delays, costs, safety)	Low	Under	The developer consultant supervise the quality of the planning. The planning consultants evaluate the source information
1-7	Coordination of the projects Helsinki Rail Loop and the Helsinki railway yard	High (costs, safety)	Low	Under	Common meetings
7	The planning has to be completed before construction can begin	High (delay)	Low	Under	Good project management
8	There will be confusion concerning contracts	Moderate (delays)	Moderate	Under	Clarifying of the contracts between different parties
8	The structures of the station will collapse during construction	High (delays, costs)	Low	Under	planning prevention measures during the Construction Planning, using of experts in the planning of the structures
8	In the construction phase of the additional track demanding structures will be constructed	High (costs)	Moderate	Under	using of experts in the planning of the structures

3. RELEVANCE: CONTRIBUTION OF THE PROPOSED ACTION TO THE TEN-T POLICY OBJECTIVES AND EU DIMENSION

3.1. Contribution of the proposed Action to TEN-T Core Network corridors, or classification as a project of common interest

The Action is located in the node of two core network corridors (*the Mediterranean Sea–Scandinavia* and *the Baltic region–the North Sea*), serving as a connection between Helsinki Airport (the Ring Rail Line) and the centre of Helsinki and making the flow of passenger transport smoother to Helsinki's harbours (*North Sea–Baltic Sea Corridor*). The Action also connects the urban tracks of the main rail line with the Helsinki–Turku railway line (*Scandinavian–Mediterranean Corridor*).

The Action (The Helsinki Rail Loop, additional track of Central Pasila and improving of the Helsinki railway yard) is included in the Project Lists of the Corridor Work Plans *of the Scandinavian–Mediterranean and North Sea–Baltic Core Network Corridors*. The Action consists of the improvement of the *Scandinavian–Mediterranean Corridor* railway section in Helsinki which an initial point for several Corridor sections. The Action is situated in the section which belongs to Helsinki–Turku and Helsinki–Vainikkala (Russian border) rail sections and links to Helsinki Airport-rail connection which are mentioned in the *Annex I.2 to Regulation (EU) No 1316/2013*. It also links to the improvement of the section Helsinki–Oulu which is part of the TEN-railway core network which is mentioned in the *Annex I.3 to Regulation (EU) No 1316/2013* as a section on the Core Network.

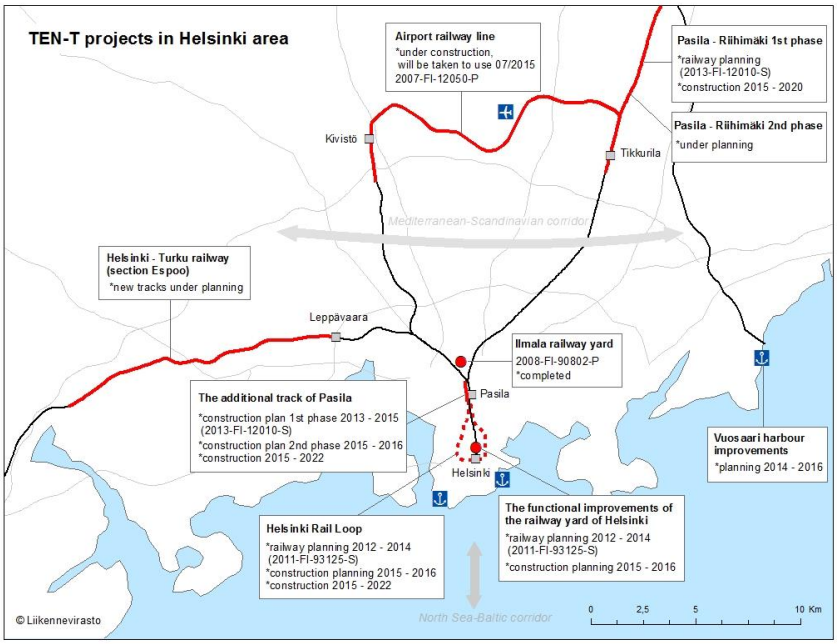


Figure 10. The Global Project linked to the other TEN-T actions.

The "network effect" produced by the proposed Action by linking to the other TEN-T actions

The Helsinki Rail Loop serves as a connection between Helsinki Airport (the Ring Rail Line) and the centre of Helsinki and makes the flow of passenger transport smoother to Helsinki's harbours. The Ring Rail Line, scheduled to be opened in the summer of 2015, is part of the rail link between the airport and city centre. Helsinki Airport is the major international and domestic airport in Finland and it's one of the main hubs in the European connections to China and Japan.

Rail capacity between Helsinki railway yard and Pasila railway yard is nearing its maximum; after the completion of the Airport Railway Line (Ring Rail) in 7/2015, full capacity will have been reached. In addition, the construction of the Pasila–Riihimäki and Helsinki–Turku railway section in Espoo increases the train traffic even more. If no additional capacity between Helsinki and Pasila in built, trains will be even more packed in the future which will weaken the punctuality and reliability of passenger train traffic. Improvement of this bottleneck is essential as it affects reliability of the whole Finnish long-distance train traffic operations, as the timetables and transfer connections of the almost all long-distance traffic operations also elsewhere in Finland depend on the trains starting from Helsinki region.

Other TEN-T actions linked to the proposed Action are presented in the figure above:

- The Helsinki Rail Loop, planned in Action 2011-FI-93125-S (completed by end of 2014).
- The additional track of Pasila; planned in Action 2013-FI-12010-S (completed by end of 2015).

Financial support is applied in 2015 for the construction phase.
- The functional improvement of the railway yard of Helsinki; earlier phase planned in Action 2011-FI-93125-S (completed by end of 2014).
- The Pasila–Riihimäki 1st phase; planned in Action 2013-FI-12010-S (completed by end of 2015). Financial support is applied in 2015 for the construction phase.
- The Helsinki Airport Line; constructed in Action 2007-FI-12050-P (completed in 7/2015).
- The Ilmala railway yard; constructed in Action 2008-FI-93125-S (completed in 2012).

In addition financial support is applied in 2015 for the projects linked to proposed Action
- improvement of the maritime access of the Vuosaari harbor

The improvement of the railway yard of Helsinki and additional track of Pasila also eliminates the bottleneck in Helsinki–Pasila railway section. The additional track enables together with the improvement of Tikkurila station (part of the project Pasila–Riihimäki 1st phase) more frequent train traffic between Helsinki and Kerava. After implementing the additional western track of Pasila, the improvements achieved by these projects can be fully advantaged:
- The improvement of the railway yard of Helsinki
- The Helsinki Rail Loop (in Helsinki)
- The improvement of the section Pasila–Riihimäki

3.2. Contribution of the proposed Action to TEN-T priorities

The proposed Action relates to following priorities defined in Article 10 of the TEN Guidelines:
- The proposed Action **ensures optimal integration of the transport modes and interoperability within transport modes** as it is a vital interconnection with networks of other modes of transport. The Action serves as a connection between Helsinki Airport (the Ring Rail Line) and the centre of Helsinki. Helsinki Airport is the major international and domestic airport in Finland and it's one of the main hubs in the European connections to China and Japan. The proposed Action also makes the flow of passenger transport smoother to Helsinki's harbours.
- The proposed Action will **eliminate a bottleneck in the existing railway network and bridges a missing link.** The capacity of the section is running out which makes the section one of the worst bottlenecks in rail network in Finland. If no additional capacity between Helsinki and Pasila in built, trains will be even more packed in the future which will weaken the punctuality and reliability of passenger train traffic. The distractions in Helsinki reflect and spread across the country. The Action will develop the key link and interconnection and eliminates current bottlenecks in the main railway network and increases capacity of the network. Described action is of vital importance for smooth traffic flows along the entire axis and would, if not completed within the agreed period time, reduce the benefits drawn from investments made on other sections of the axis. The long distance passenger will also have shorter travel times and they will be able to travel closer to their destination in the centre of Helsinki.
- The Action also **promotes the efficient and sustainable use of the infrastructure by increasing capacity.** The Action increases the capacity and reliability of the train traffic. The Helsinki Rail Loop allow commuter train operations to use the new loop link and thus relief capacity for the long distance trains at the existing depot area. Project promotes modal shift in passenger traffic contributing thus use of more sustainable transport modes. The realization of the project reduces traffic volumes and congestion on roads by improving the capacity and service level of the passenger train traffic.
- Modal shift provides improved traffic **safety** and the number of the road traffic accidents will decrease The safety of the pedestrians is taken into consideration in the planning of the locations of the exits and entrances of the underground stations of Helsinki Rail Loop and to the platform of the additional track. The underground stations of Helsinki Rail Loop will be monitored so **security** of the train traffic will improve.
- The **accessibility for all users** is taken into account in the planning of the connections to train. The development of traffic connections also improves **social integration and conditions** as the accessibility improves and the passengers will be able to travel closer to their destination in the centre of Helsinki.
- The Action will optimize the capacity and **efficiency** of existing and new infrastructure, and improves the reliability of the the passenger transport services by decreasing the distractions and delays of the traffic.
- The project will have a positive impact on **climate and environment**. The project will develop sustainable mobility of persons and goods in accordance with the objectives of the European Union on sustainable development. The Action improves the competitiveness of railways by reducing the journey length and time and ensuring sufficient capacity and service level. The planned impact will

increase the competitiveness of sustainable transport modes in the national transport system, by transferring passenger transport flows from road to rail. This will reduce the possibility of the environmental risks and hazards.

- The project ensures the **service quality and continuity of traffic flows** in *Scandinavian–Mediterranean Corridor* and between the *Scandinavian–Mediterranean and North Sea–Baltic Sea Corridors* as the project eliminates a bottleneck in the corridor.

In addition, the Action mitigates exposure of urban areas to negative effects of transiting rail transport.

3.3. Contribution of the proposed Action to the objectives of the priority under which the proposal is submitted.

The Action contributes for 2014 CEF Transport Multi-annual Call: Funding Objective 1 Priority "Pre-identified projects on the corridors of the Core Network (railways, inland waterways, roads, maritime and inland ports)".

The proposed Action relates to pre-identified Core Network Corridor sections, as stipulated by Annex I, part I.2 of the CEF Regulation. The proposed Action concerns studies which aims at accelerating the removal of bottlenecks (in terms of capacity and service quality) which hinder the traffic flows on Core Network Corridors.

The proposed Action includes conventional railway study which are in line with Chapter II and III of the TEN-T Guidelines. In Finland some requirements are not demanded (for example the track gauge of which is different and detached from the main rail lines in the Union). Study aims at removal of bottlenecks (in terms of capacity and service quality) and bridging missing link which hinder the traffic flows. The proposed Action provides for interconnection between rail and other modes of transport. The Action improves the connection between Helsinki Airport (the Ring Rail Line) and the centre of Helsinki and makes the flow of passenger transport smoother to Helsinki's harbours. The action aims to improve the smoothness of traffic which mitigates the impact of noise and vibration caused by rail transport. See also 3.2.

The Action improves the Europe long-term competitiveness, alleviates bottlenecks and reinforces the role of rail transport in Finland by adding capacity to rail network. The Action will develop sustainable mobility of persons and goods in accordance with the objectives of the European Union on sustainable development. It is also expected that certain roads will be decongested, as a consequence of redistribution between modes.

Implementation of the project secures efficient and reliable railway traffic and it also facilitates increasing of railway traffic until 2020. The project is mature and ready to be started in 2015. Described action is of vital importance for smooth traffic flows along the entire axis and would, if not completed within the agreed period time, reduce the benefits drawn from investments made on other sections of the axis.

The Member State shall take all necessary measures to ensure that the project are carried out in compliance with relevant Union and national law, in particular with Union legal acts on the environment, climate protection, safety, security, competition, state aid, public procurement, public health and accessibility.

The European added

The Action is very important for Finland. Improvement of this nodal point is essential as it affects reliability of the whole Finnish long-distance train traffic operations, as the timetables and transfer connections of the almost all long-distance traffic operations also elsewhere in Finland depend on the trains starting from Helsinki region. Traffic in Helsinki railway yard has increased 40 % in last 10 years and the growth continues. It has been estimated that the number of the inhabitants in Helsinki will increase 30 % by the year 2050. The infrastructure and structures of the Pasila district are strongly developing in the coming years. The city of Helsinki constructs a new city centre block to the area of the former railway yard in Pasila. In ten years, there will be 20 000 new inhabitants and 50 000 new workplaces in Pasila. Increased number of passengers requires an efficient public transport system.

The Action produces European added value as it is part of the Scandinavian-Mediterranean Corridor in Helsinki Region. The stations in Helsinki provide interoperability between commuter and long-distance travelling and connect to Helsinki airport line as well. Helsinki/Vantaa airport is the major international and domestic airport in Finland and it's one of the main hubs in the European connections to China and Japan. Ongoing project The Ring Rail Line, scheduled to be opened in the summer of 2015, is part of the rail link between the airport and city centre of Helsinki. The Action forms also a link to main railway leading to northern Finland and peripheral and outermost northern regions of the Community and to Barents Euro-Arctic transport region. The stations at Helsinki (Helsinki main railway station and Pasila station) and their railway yards are the most important nodal points of the Finnish TEN-T rail network. The rail traffic arrangements in the Helsinki region affects the functionality of rail transport in Finland as a whole. The Action produces

European added value as it the international transports can operate more economically.

Article 4

The Action contributes to several objectives in mentioned in Article 4. The Action improves cohesion

- as it improves the nodal point which affects reliability of the whole Finnish long-distance train traffic operations, as the timetables and transfer connections of the almost all long-distance traffic operations also elsewhere in Finland depend on the trains starting from Helsinki region. The main rail traffic connection which begins in Helsinki goes all to way to northern Finland. Railway connection form an important connection to sparsely populated, remote and outermost regions of Northern parts of Europe, Finland and Lapland.

The Action improves efficiency through

- the removal of bottleneck and the bridging of missing links. The Action aims to improve capacity and decrease distractions. The railway system will be also able to recover from the distractions faster as the number of the alternative routes used by the long-distance traffic increases. Also the commuter and long distance traffic don't intersect anymore at the Pasila. After implementing the improvement of the Helsinki railway yard it is possible to increase the number of trains operated in the railway yard and the trains can also be operated in a tighter schedule. The Action also speeds up maintenance measures when the faults can be located faster and reduces the disturbances of the traffic caused by the maintenance measures which take place on the railway yard.
- The additional track enables together with the improvement of Tikkurila station (part of the project Pasila–Riihimäki 1st phase) more frequent train traffic between Helsinki and Kerava.
- The Action is a vital interconnection with networks of other modes of transport as it serves as a connection between Helsinki Airport and the centre of Helsinki and making the flow of passenger transport smoother to Helsinki's harbours. The import and export of the large ports of Southern Finland will be more efficient as the rail freight capacity improves.
- It promotes economically efficient, high-quality transport contributing to further economic growth and competitiveness.

The Action improves sustainability:

- The project promotes modal shift and reduce the need for bus and car traffic along with associated environmental impacts and thus promote the EU's climate policy objectives.
- The Action decreases the journey time and congestion of the train traffic and enables smooth connections to different destinations which also all decreases air pollution and emissions.
- The project area of the additional track is related to one of Finland's largest construction projects ever implemented (Central-Pasila development where a whole new city block is built). The Action contributes that residents and people working in area will use the improved public transport system instead of cars.
- The Action promotes the resource-efficient use of the network.

The Action increases the benefits for its users:

- There will be less distractions and delays in the passenger train traffic in the Metropolitan area. This also reflects positively on the whole country.
- The capacity of the train traffic improves, more trains can operate in the network

3.4. Contribution of the proposed Action to the internal market, the cohesion policy and the Europe 2020 strategy

The project connects Helsinki, the capital of Finland, to main railway line, airport and makes the flow of passenger transport smoother to Helsinki's harbours. Helsinki airport is the major international and domestic airport in Finland and it's one of the main hubs in the European connections to China and Japan.

Developing this connection between airport, main railway connection and Helsinki the enables and eases the movement of people, services and capital. Therefore it also improves competitiveness, employment and social cohesion. Enhancing the international competitiveness will also attract foreign companies and investments. Internationally competition is improving mostly because access to passenger traffic becomes faster and more reliable.

Nowadays route is heavily used and as the capacity is not sufficient part of the traffic is using roads instead of railways, which would otherwise be the most competitive alternative. The project promotes modal shift and reduce the need for bus and car traffic along with associated environmental impacts and thus promote the EU's climate policy objectives.

Large infrastructure projects have a significant positive effect on employment. The development of traffic connections improves social integration. The Action is connected to one of Finland's largest construction projects ever implemented (Central-Pasila development where a whole new city block is built).

Improvement of this nodal point affects reliability of the whole Finnish long-distance train traffic operations, as the timetables and transfer connections of the almost all long-distance traffic operations also elsewhere in Finland depend on the trains starting from Helsinki region. The Action contributes to the internal market and the single market as well as to the cohesion policy by developing the trans-European transport network and by removing a bottleneck from the railway system of Finland.

3.5. Socio-economic benefits of the proposed Action at macro level

A study has been made of the Helsinki Rail Loop's sociological benefits. Developing railway traffic affects the economies of the nearby municipalities in many ways by increasing accessibility, commuting and market areas, economic efficiency and productivity and thus investments and employment. The development of traffic connections improves social integration. The Helsinki Rail Loop will increase the number of public transport users and speed up travel in the Helsinki region. Walking distances and transfer times will be shortened and journeys towards the Helsinki city centre, Töölö and Hakaniemi expedited. The companies benefits from improved accessibility. When public transport connections improve, it reflects on trips of employees and customers. It will be easier to get new employees and wide of potential market area. Improved accessibility reflects on price of business premises.

Major construction projects have a significant positive effect on employment during the investment phase. In addition to construction work, they also provide work in, for example, he building materials industry, material and equipment manufacturing and transport services. It is estimated that 1 M€ in construction business means effect of 12 400 direct work hours and 10 000 indirect hours.

In the metropolitan area of Helsinki lives 1,4 million people which is a quarter of Finland's population. It has been estimated that the number of the inhabitants will be 1,8 million by the year 2050 (+28,5 %). Increased number of passengers requires an efficient public transport system. The project benefits the whole metropolitan area. It will be easier to get new employees and wide the potential market area. Improved accessibility reflects on price of business premises.

Implementation of the project improves economic situation and ensures the economic life of the region. The improvement of the railway system and capacity improves the mobility, economic efficiency and productivity and strengthens investments and employment. If the project is not carried out, the economy of the region, competitive ability and the effectiveness of the traffic will suffer.

Developing railway traffic affects the economies of the nearby municipalities in many ways by increasing accessibility, commuting and market areas, economic efficiency and productivity and thus investments and employment. The development of traffic connections improves social integration. Improving public transport connections creates excellent possibilities to track-side municipalities to further develop new housing, commercial and industrial areas situated in good locations along the track.

The companies benefits from improved accessibility. International competitiveness and improved inter-modality will also attract foreign companies and investments. The economic and employment effect will spread throughout the country, especially as regards tourism and logistics. Also the import and export of the large ports of Southern Finland will be more efficient as the rail freight capacity improves.

When public transport connections improve, it reflects on trips of employees and customers. It will be easier to get new employees and wide of potential market area. Improved accessibility reflects on price of business premises.

The development of traffic connections improves social integration. The local and long distance passenger will have shorter travel times and they will be able to travel closer to their destination in the centre of Helsinki. The benefits of the project spread fairly and widely to target different groups (inhabitants, economic life, public transport, pedestrian and bicycle traffic, vehicle traffic).

3.6. Added-value of EU funding on the financing of the proposed Action and the commitment of the different stakeholders

At the current financial situation, the yearly budget allocation is quite low. The EU support would boost the implementation of the Global project. If the implementation is delayed to a long extent, it will cause severe problems for railway operations. Because the section is operated at its capacity even the maintaining of the competitiveness of the traffic requires immediate improvements.

TEN financing increases stability at the national level and commitment of the authorities to expressed timetable would also be better, it reduces the risk that project have to revise because of lacking financing. Funding also accelerates the implementation of the projects as the budget funding would be lower at the planning phase. TEN financing would also improve the general acceptability of infrastructure investments.

Funding as part of the TEN-T network will indicate also to international contractors, that the project is not only nationally significant but also significant from the European perspective. It is believed that TEN-T funding will be seen locally as a benefit of EU membership and will further promote the support of EU policies and goals in Finland. The railway segment will promote economic cooperation between the various areas and improve the overall competitive position of the nearby areas and companies.

The implementation of the work alleviates bottlenecks and accelerates the development of the TEN-network which improves the Europe long-term competitiveness.

3.7. Cross-border section

This section aims at verifying whether or not any section of the proposed Action corresponds to the definition of cross-border sections in Article 3 (m) of the TEN-T Regulation.

A. Does the proposed Action require actions/construction works on both sides of the borders between two Member States? ☐ Yes ☒ No

If yes, indicate which Member States are directly concerned and which activities each of them will be carrying out.

B. Does the proposed Action ensure, via a third country, continuity of a core network corridor between two Member States? ☐ Yes ☒ No

If yes, indicate which Member States and third country are directly concerned and which activities each of them will be carrying out.

C. Is the proposed Action located on a section which ensures the continuity of a project of common interest between the nearest urban nodes on both sides of the border of two Member States or between a Member State and a neighbouring country? ☐ Yes ☒ No

If yes, provide justification for classifying the proposed Action (or part of the proposed Action) as cross-border and explain which activities the Member State(s) will be carrying out.

D. Has a written agreement been concluded between the Member States concerned or between the Member States and third countries concerned relating to the completion of the cross border section, in accordance with Article 7 (2) of the CEF Regulation?

☐ Yes
☒ No

If yes, describe the main elements of this agreement and attach a copy of it in annex.

E. Have the Member States concerned made a joint commitment regarding the proposed Action, i.e. (a) concluded a formal written agreement at appropriate level, (b) agreed a common financial plan or coordinated financial plans, (c) agreed on a common timetable for studies and works, including a coordinated date of opening to service, (d) agreed on how the Member States concerned coordinate their procedures for assessing environmental effects and socio-economic effects thereof, and how they use their best endeavours to conduct a trans-national enquiry prior to the granting of the building permit?

☐ Yes
☒ No

Clarify and detail as appropriate, and attach copies of the related documents

F. Have the Member States (and potentially third countries) concerned created a common, technically and financially indivisible structure for the implementation of the action?

☐ Yes
☒ No

If Yes, explain the role and legal status of this structure, and attach the relevant legally binding agreement(s).

G. Provide information on the financial viability of the cross-border action and on the timetable for carrying it out. Explain which guarantees are issued - preferably jointly - by the Member State(s) to ensure this viability and the timetable. This applies also if the applicant is not a Member State. Please attach these guarantees in annex.

☐ Yes
☒ No

3.8. Bottleneck

Does the proposed Action addresses improving a bottleneck in the sense of Article 3 (q) of the TEN-T Regulation?

☒ Yes
☐ No

If yes, indicate which bottleneck will be improved and which activities of the proposed Action will facilitate this.

The Action is a study. The planning phase is a requirement for the implementation. The location of the Action in the Finnish railway network is central. The Action is located in the node of two core network corridors. The Action connects the urban tracks of the main rail line with the airport line and it also makes the flow of passenger transport smoother to Helsinki's harbours.

Traffic in Helsinki railway yard has increased 40 % in last 10 years. It has been estimated that the number of the inhabitants in Helsinki will increase 30 % by the year 2050. The city of Helsinki constructs in years 2014–2020 a new city centre block and new transport terminal to the area of the former railway yard in Pasila.
Traffic operations between Helsinki railway yard and Pasila railway yard will increase in the near future after the completion of the Airport Railway Line (Ring Rail) in 07/2015, and full capacity will be reached. The ongoing improvement of the Pasila–Riihimäki section will increase the number of trains even more.

The section Helsinki–Pasila is a bottleneck. The capacity of the railway yard of Helsinki and Pasila station are running out which makes the section one of the worst bottlenecks in rail network in Finland. The rail traffic arrangements in the Helsinki–Pasila rail section affects the functionality of rail transport in Finland as a whole as the distractions in Helsinki reflect and spread across the country. This causes that train operations are very sensitive to disturbances and delays. This affects negatively into the continuity of long-distance and cross-border flows. If no additional capacity between Helsinki and Pasila is built, number of train operations is at its maximum level and the punctuality and reliability of both long distance and commuter passenger train traffic will be lost. It is not possible to increase the capacity of the train traffic using the current tracks and the existing railway yard arrangements.

Helsinki is the departure or arrival station of the most long-distance trains (70 %) in Finland and all commuter trains. All the trains stop also at Pasila. The railway yard of Helsinki and Pasila station are operating close to their capacity. Because the Helsinki is the railhead of the Finnish railway network, all local and long distance trains must change directions at the cramped railway yard of Helsinki. This makes congestion even worse.

The Helsinki Rail Loop increases the capacity and reliability of the train traffic by allowing commuter train operations to use the new loop link instead of changing the direction of the train in the congested railway yard of Helsinki. It is estimated that after implementing the Helsinki Rail Loop, 70 % of the traffic decreases in the railway yard of Helsinki. This relief capacity for the long distance trains and makes the train traffic management more efficient. The Helsinki Rail Loop removes the bottleneck and bridges a missing link between long distance traffic, airport and City Centre.

The additional track project improves the capacity and decreases the distractions and delays of the passenger train traffic. The construction of a new city centre block and new transport terminal (Tripla-project) can proceed after implementation of the additional track of Pasila. After implementing the project, six tracks and platforms will be used instead of five. Track will be used by the long distance traffic (main traffic connection). Also the commuter and long distance traffic don't intersect anymore at the Pasila. After implementing the project it is possible to increase the number of trains.

The improvement of the Helsinki railway yard improves capacity and sensibility to distractions. After implementing the project it is possible to increase the number of trains operated in the railway yard and the trains can also be operated in a tighter schedule. The disturbances of the railway traffic in area of Helsinki as the number of the alternative routes used increases.

4. MATURITY OF THE PROPOSED ACTION

4.1. Approval of the proposed Action

This application and the project as presented here has been accepted in the Cabinet Finance Committee meeting, which is one of the decision making instruments for the Government.

The Helsinki Rail Loop

- is part of the current Helsinki Region Transport System Plan (HLJ 2011), the Letter of Intent between Helsinki Region's municipalities and three government ministries concerning land use, housing and transport (MAL) for 2012–2015
- is mentioned in the Government transport policy report approved in 2012 and in the agreement between the Helsinki Region's municipalities and the three government ministries concerning the promotion of housing and supporting major infrastructure projects.
- The Helsinki Rail Loop is also included in the investment programme 2016–2025 for the draft Helsinki Region Transport System Plan (HLJ 2015), currently being circulated for comments. The alignment has been presented in the general plan of the city of Helsinki. There is a decision that city plan will be changed.
- The state has allocated funding of 40 M€ to the planning of the Helsinki Rail Loop (see budget decision of 2012, annex 19). The parliament has decided to proceed with this planning in 2014. There is a co-operation agreement with the city of Helsinki (finances 17 % of the planning)
- EIA completed and accepted in 2011 and the general plan was approved by the Finnish Transport Agency in spring 2012. General Plan and EIA have been accepted by the environmental authority.

The improvement of the functionality of Helsinki railway yard

- The construction of the Helsinki railway yard is mentioned in the Transport Policy of the Government as significant project which the Government commits to implement 2012–2015.
- The project is included in the investment programme 2016–2025 for the draft Helsinki Region Transport System Plan (HLJ 2015), currently being circulated for comments.

The additional track of Pasila

- Parliament of Finland has taken the financing decision enabling the proceeding in budget of 2014.
- The ELY Centres has given statement in 24.2.2014 that EIA is needed in the Pasila station
- The Finnish Transport Agency, YIT (constructor), the City of Helsinki and Senaatti-kiinteistöt signed a contract 29.1.2014 concerning realization of the Tripla project.
- The project is included in the investment programme 2016–2025 for the draft Helsinki Region Transport System Plan (HLJ 2015), currently being circulated for comments.

4.2. Political commitments to the proposed Action (and Global Project)

See 4.1.

4.3. Public consultation

The Helsinki Rail Loop

The general plans and the environmental impact assessment were completed in the spring of 2011. Public consultation has been sought on the general plan and the environmental impact assessment. After the receipt of the comments from the public consultation, the approval process for the general plan will continue in August 2011. The general plan proceedings will be concluded when an environmental impact assessment review by the authority has been received. During General Plan and EIA phases there have been extensive co-operation and participation processes, public conversations and dialogue. The track law defines the contents of the interaction.

The communication consultant assists in the project and takes care of the public consultation. Information is also given in internet-page: www.fta.fi/city-rail, https://www.facebook.com/pisararata and in Twitter which are updated by the communication consultant. The contact information of the communication consultant is in the web-pages and the citizens can contact them. It is also possible to give feedback. Several public events are and will be arranged. Media newsletters will be also made and press briefings held.

The improvement of the Helsinki railway yard

During planning phases there has been active interaction with the stakeholders and public. The results of the studies have been presented to public. The comments and opinions of the stakeholders has given been taken into account in the process. Due to the central location of the Action, the communication with the stakeholders and public has been given special consideration. Also workshops have been held in the planning phases. Information is also given in internet-page: www.liikennevirasto.fi/helra

The additional track of Pasila

An interaction plan has been made during the Railway Plan phase (interaction plan completed 10.10.2013). The communication plan was updated 16.5.2014. Interaction will be done according to the Railway Act. A communications consultant works together with the communications of FTA. In the planning phase there were public meetings in Helsinki where the draft of the plan was presented and participants could give feedback. After completing the plan, it will be publicly seen before accepting the plan. The public has an opportunity to comment the plan.

The proposed Action is part of the project entity “the new city centre of Central-Pasila” where the city of Helsinki constructs in years 2014–2020 a new city centre block to the area of the former rail yard in Pasila.
These projects have also a common communications group and information is given of the both projects at the same time (for example newsletter).

The main stakeholders will be consulted during the planning process. Stakeholder meetings are arranged regularly. The main objective of the meetings is the hearing and informing of the stakeholders. In addition negotiations with the city of Helsinki will be also held. The planning will be done in close co-operation with the planning group of Central Pasila. The project has internet-pages www.liikennevirasto.fi/keskipasila and it is also on Facebook www.facebook.com/pasilauudistuu

4.4. Readiness / technical maturity of the proposed Action

The Helsinki Rail Loop
Ongoing works: All the contracts have been signed and the all activities are ongoing. The project management and planning is in full flow. The geological investigations will be more detailed than earlier planning phase. Construction can begin in the construction planning phase.

The improvement of the Helsinki railway yard
Ongoing works: None.
Upcoming works: The tendering of the planning

The additional track of Pasila
Ongoing works: The planning of the technical room and its systems is ongoing.
Upcoming works: The tendering of the planning

The construction plans are needed in the construction phase.

4.5. Building permits

Subject of building permit procedure	Date of award of building permit	If relevant, foreseen date of award of building permit	Foreseen start date of works
N.A for studies			

4.6. Procurement

4.6.1 Procurement in general

The procurement is carried out according to the European competition legislation for each activity, see 4.4. The general public procurement procedures are followed and the announcement will be published in the electronic Official Journal of EU (the amount exceeds the EU threshold value). For the procedures of each activity, see 4.6.2.

4.6.2 Contracts already awarded and procedure(s) applied

The Helsinki Rail Loop
All the contracts concerning planning has been signed. Also smaller procurements for example cleaning, maintenance, electricity, safety of the project office, procurements for the communications consultant and procurement for the source information are made.

Activity 1: The Construction Plan of the Helsinki Rail Loop: The Project management			
	Procedure	***Chosen consultant***	***Contract period***
Developer consultant	restricted	Sweco Ltd	1.2.2013–31.12.2016
The Communications consultant	restricted	AC-Sanafor	22.5.2012–31.12.2016
Building Information Model, maintenance service	restricted	Vianova Ltd	14.10.2013–31.12.2016
the expert service for the risk management	restricted	Pöyry Finland Ltd	4.11.2013–31.12.2016
Independent Safety Assessor (ISA)	restricted	Bureau Veritas	12.2.2014–31.12.2016
Copying and printing services	restricted	Grano Lt	14.2.2014–31.12.2016
Project office rent	direct	Mediakeskus Ltd	25.4.2013–31.12.2016
Assisting of the client concerning BIM	direct	VTT	9.12.2013–31.12.2016
Notified Body consultation	framework agreement	VR Track ltd	16.4.2014–31.12.2016
procurement of the planning source information	framework agreement	Ramboll Finland Ltd	13.8.2013–31.12.2016
Financial and implementation model study	framework agreement	KPMG Oy	9.6.2014-31.12.2016
Guidance of the geological investigations	framework agreement	Ramboll Finland Ltd	13.2.2014-31.12.2016

Activity 2: The Construction Plan of the Helsinki Rail Loop: Töölö			
	Procedure	***Chosen consultant***	***Contract period***
Architect and main planning	restricted	ADT Ltd	21.11.2013–31.12.2016
Rock and geotechnical planning	restricted	Pöyry Finland Ltd	4.11.2013–31.12.2016
Structural planning	restricted	Pöyry Finland Ltd	13.3.2014–31.12.2016
Planning of the area 1 Vauhtitie underpass and its surroundings	restricted	Pöyry Finland Ltd	4.11.2013–31.12.2016

Activity 3: The Construction Plan of the Helsinki Rail Loop: The City Centre			
	Procedure	***Chosen consultant***	***Contract period***
Architect and main planning	restricted	CJN-Arkkigraf Ltd	4.11.2013–31.12.2016
Rock and geotechnical planning	restricted	Saanio&Riekkola Ltd	4.11.2013–31.12.2016
Structural planning	restricted	TYL Sipti-Pohjatekniikka	13.3.2014–31.12.2016

Activity 4: The Construction Plan of the Helsinki Rail Loop: Hakaniemi			
	Procedure	***Chosen consultant***	***Contract period***
Architect and main planning	restricted	PES-Arkkitehdit Ltd	9.12.2013–31.12.2016
Rock and geotechnical planning	restricted	Saanio & Riekkola Ltd	9.12.2013–31.12.2016
Structural planning	restricted	FKW Consultant Group	13.3.2014–31.12.2016
Planning of the Area 2	restricted	FKW Consultant Group	13.3.2014–31.12.2016

Activity 5: The Construction Plan of the Helsinki Rail Loop: Technical track and special field planning			
	Procedure	***Chosen consultant***	***Contract period***
track planning	restricted	Sito Ltd	4.11.2013–31.12.2016
traffic management and safety device planning	restricted	Proxion Plan Ltd	23.10.2013–31.12.2016
fire technical planning	restricted	L2 Paloturvallisuus Ltd	16.4.2014–31.12.2016
building services engineering, electricity and automation planning	restricted	Consultant Group Nissinen Niemistö Granlund	13.3.2014–31.12.2016
building services engineering, HPAC (heating, plumbing, air-conditioning) planning	restricted	Granlund Ltd	18.3.2014–31.12.2016
electrified track planning	restricted	Proxion Plan Ltd	19.5.2014–31.12.2016
Street, traffic and environmental planning	restricted	FKW Consultant Group	4.11.2013–31.12.2016
Planning of the duct transfer	restricted	Pöyry Finland Ltd	14.11.2013–31.12.2016
noise planning	restricted	Akukon Ltd	4.11.2013–31.12.2016
Radio network planning	restricted	Omnitele Ltd	2.5.2014–31.12.2020
Coordination with the underground premises of the state	direct procurement	Senaatti-kiinteistöt	13.2.2014-31.12.2016
Defining of the source information of the fire simulation	direct procurement	VTT	20.5.2014-31.12.2016

Activity 6: The Construction Plan of the Helsinki Rail Loop: The geological investigations			
	Procedure	***Chosen consultant***	***Contract period***
Measurements services	restricted	GeoUnion Ltd	9.4.2014-31.12.2016
Soil investigations	restricted	Taratest	29.8.2013–31.12.2016
Soil investigations	restricted	GeoUnion Ltd	29.8.2013–31.12.2016
Rock investigations	restricted	Suomen Malmi Ltd	29.8.2013–31.12.2016
Rock investigations	restricted	Destia Oy-Pöyry Finland Ltd –SITO Ltd	29.8.2013–31.12.2016
Geological investigations of underground cellars, premises	restricted	Suomen Malmi Ltd	29.8.2013–31.12.2016
repairements after drilling	direct	Several	18.12.2013–31.12.2016
Traffic arrangements concerning Geological investigations	direct	Several	5.2.2014–31.12.2016

Activity 8: Construction Plan of the additional track of Pasila 2nd phase			
	Procedure	***Chosen consultant***	***Contract period***
The main planning of the technical room and systems	framework agreement	Sweco Architects	19.12.2014–31.12.2015
Structural planning (technical room and systems)	direct procurement	Aaro Kohonen	19.12.2014–31.12.2015
Electricity planning (technical room and systems)	framework agreement	Proxion Plan	19.12.2014–31.12.2015
Planning of cable routes (technical room and systems)	framework agreement	Ramboll Finland Ltd	19.12.2014–31.12.2015

4.6.3 Procurements planned during implementation

Activity 7: The Construction planning of the Helsinki railway yard			
	Procedure	***Tendering***	***Contract period***
The developer consultant ABI		6/2015	8/2015–09/2016
The inspection consultant of ABI	framework agreement	6/2015	8/2015–09/2016
The developer consultant CDEF and GH (including inspection)		6/2015	8/2015–12/2018
2nd phase (ABI)	framework agreement	6/2015	8/2015–09/2016
3rd phase (CDEF)	restricted	6/2015	8/2015–8/2017
3rd phase (CDEF) safety devices	restricted	6/2015	8/2015–5/2017
4th phase (GH)	restricted or framework	12/2016	2/2017–12/2018
ISA	restricted		
Geological investigations and contaminated soil research, several contracts	framework agreement	6/2015	8/2015

Activity 8: Construction Plan of the additional track of Pasila 2nd phase			
	Procedure	***Tendering***	***Contract period***
The Construction Plan	restricted	03/2015	1.6.2015–31.12.2016

4.7. Pending legal/administrative/technical issues

None.

4.8. Information on funding sources (state budget(s), regional / local budget(s), applicant's self-financing, EIB loan(s), other loan(s))

The state has allocated funding of 40 M€ to the Helsinki Rail Loop planning. The city of Helsinki also finances the Helsinki Rail Loop (the share of 17 %). The financing of the city is secured (budget decision). The planning is at first financed by the state. The state invoices the city of Helsinki three to four times a year.

The state has allocated funding of 40 M€ to the construction planning and construction of the additional track of Pasila. The planning of the Helsinki railway will be financed by the planning budget of the Finnish Transport Agency (FTA).

4.9. Public-private partnership

N/A for studies.

4.10. Revenues of the proposed Action

None.

5. IMPACT OF THE PROPOSED ACTION

5.1. Impact of the study as a decision-making tool

For **studies only**, complete sections 5.1 to 5.3 and, where appropriate, other sections. For proposals involving **works only**, complete sections 5.3 to 5.9.

Wherever applicable, do not feel restricted by the examples set out in this guide. Refer to the FAQ of CEF Transport funding and try to give as comprehensive information about your proposed Action as possible.

The construction plans are used as tendering documents in of the tendering of the construction contracts. The construction plans are the plans how the construction will be implemented and how the construction areas are geographically divided. The construction plans will be used during the whole construction period.

Financial CEF support is also applied for the construction of the Helsinki Rail Loop and the additional track of Pasila. The construction of these projects will be done according to these planning outcome of proposed Action presented in this application.

5.2. Impact of the study in terms of policy-making and developing best practices

The study includes defining of the contents of the construction phase. These elements of the study could be used to develop several best practices.

The study of the Helsinki Rail Loop provides information about the tunnel construction and defining technical solutions in demanding circumstances. It also includes defining of the safety matters and system concerning underground transport system (as the ventilation and smoke removal systems).

The planning of the Helsinki railway yard includes combining of the existing and new safety device systems. Also the renewal of the interlocking device in 10-15 years will be taken into account. During the planning it is defined what is the most efficient way to implement this.

The planning of the additional track of Pasila gains experience of the planning of the works and work phasing in the congested area. The project also combining of the several building information models used by the partners in cooperation.

5.3. Ex-ante evaluation(s)

The Helsinki Rail Loop

The general plan 2011 (annex 14) and the environmental impact assessment 2011

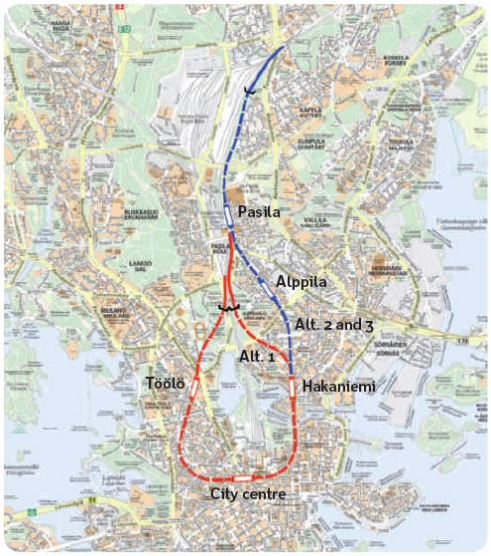
The general plan and the EIA included information about the project alternatives, on environmental impacts and costs. The decision was made on functional and technical reasons and environmental factors. In the general plan the operational solutions of the project alternatives, such as the location of the stations and railway tunnels and the communications were planned and the construction costs estimated. The objective of the plan was to ensure the service quality, capacity and reliability of the train traffic and evaluate the impacts of the plan.

The main indicators used were the growth of the capacity of the railroad traffic, increased number of trains, the number of the disturbances decreased and improved connections of the public transport. These indicators are followed by the Helsinki Region Transport.

Three different railway alignment alternatives were examined in the plan, as well as the option of building a train terminal for commuter traffic in Pasila. In alternative 1 (which was chosen) the Helsinki Rail Loop would have three new underground stations: Töölö, the city centre and Hakaniemi. The tunnel awnings are located west of the main rail line, south of the Eläintarha sports field and east of the Alppipuisto Park. Two additional tracks east of the track between Pasila and Tivolitie are included in this alternative. In alternatives 2 and 3 the tunnel awnings are located south of the Eläintarha sports field and in Käpylä north of Hakamäentie. In alternative 2 the new underground stations are located in Töölö, the city centre, Hakaniemi and Pasila. In alternative 3 an underground station in Alppila has been added. An alternative to the Helsinki Rail Loop, a terminal for commuter traffic to be constructed in Pasila and serving as the terminal station for some of the

trains, was studied in the general plan and environmental impact assessment.

However, the Pasila railway terminal was found to be a clearly inferior alternative to the Helsinki Rail Loop. For the passengers having to change trains in Pasila in order to access the Helsinki city centre, the travelling times would become longer and passenger convenience would deteriorate. Out of the three railway alignment alternatives, the chosen alignment clearly proved to be the best alternative, from both a technical and a financial point of view. The gain achieved by the other alternatives would not have exceeded their costs. The alternative chosen for further planning was the one where the tunnel section starts south of Pasila Railway Station, at Eläintarha sports field and Alppipuisto Park. The track runs in two parallel tunnels.



Alternative alignments and stations for the City Rail Loop.

The main results were of the Helsinki Rail Loop:

- Makes the developing of the public transport possible
- The lines of the bus traffic can be reduced and public transport can be intensified in the area of the center.
- The Helsinki Rail Loop increases the use of the railway traffic significantly.
- The service area area enlarges significantly from the present one.
- Reduces car traffic, bus traffic and tram traffic and pedestrians who cross the streets; reduces the traffic accidents risk and environmental hazards of the traffic.

The urban railway traffic of nearby cities and the Airport Railway (Ring Rail) Line Commuter trains can be transferred to the Helsinki Rail Loop, which will allow Helsinki Central Railway Station to free tracks for regional and long-distance traffic.

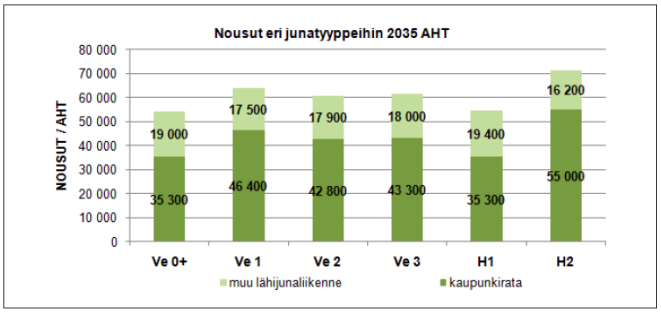


Figure 11. The number of passengers per day in different alternatives.

Alternative 0 means situation where he Helsinki Rail Loop is not implemented and only small other necessary investments are made.
Alternative 0+ means situation where the Helsinki Rail Loop is not implemented but instead other necessary investments are made in order to maintain operability.
Alternative 0+ H1 and H2, sensitivity analysis; modifications in metrolines.
Alternative 1 is the chosen alignment (alt 2 and 3 are presented in map above).

It is estimated that population will grow 28 % (+ 370 000 inhabitants) and the amount of workplaces 28 % (+ 200 000 jobs). In project alternative 1 user numbers of the commuter trains grow 30 % and in project

alternatives 2 and 3 about 20 % with respect to comparison alternative. 5 to 10 % of local train passengers start using the Helsinki Rail Loop. Significance of the station of Pasila as local and national passenger terminal increases. It is estimated that in 2035 on station of Pasila there will be 40 % trips more than in the present situation. Helsinki Rail Loop project adds about 12 000–14 000 public transport trips in workday day. In metropolitan area the share of the public transport grow about 0,4 –0,5 % (share 35,4% - > 35,9%) from motorised vehicle trips.

Figure. Comparision of The Helsinki Rail Loop (Hanke Ve 1) and other alternatives in 2035.

	Hanke (Ve 1)	Ve 0+ (H1)	Ve 0+	Ve 0
Trips (trips / day)	4 734 616	4 734 934	4 735 139	*4 727 233*
Public transport trips	1 058 381	1 048 954	1 044 473	*997 206*
The share of public transport trips, 14 communes	31,0 %	30,7 %	30,6 %	*29,6 %*
The share of public transport trips, Helsinki metropolitan area	35,9 %	35,5 %	35,4 %	*35,0 %*
Time costs of traffic (M€/year)	4 340	4 339	4 340	*4 339*
CO_2-emissions of traffic (1000 ton/yeas)	1 938	1 936	1 932	*1 957*
Costs of emissions of traffic (M€/year)	73	73	73	*73*
Costs of accidents of traffic (M€/year)	972	974	976	*1 045*

The improvement of the Helsinki railway yard

Study of the functional improvement of the railway yard of Helsinki 2014 (annex 15)
The objective was to increase the capacity of the Helsinki railway yard and decrease the sensibility to distractions. In the report the functionality of the railway yard of Helsinki was examined with the present volumes of traffic and an alternative traffic model was examined. In the report it was stated that it has never been possible to design the railway yard of Helsinki purely on a traffic basis and that the new traffic models cause significant changes in the switch arrangements of the railway yard. There were six alternatives which were simulated in the study. Also the functionality of the City Helsinki Rail Loop was simulated. The costs and the expected outcomes were compared. As a result, one of the alternatives was chosen to further development. The Study was made as a part of the Action Improving punctuality and reliability of passenger train traffic (2011-FI-93125-S, 5,0 M€).

The Improvement Plan (2014)
The aim of the project was to improve the sensibility to disturbances and improvement of the capacity. The objective of the study was to defining of the earlier made plans and risk management, updating of the simulation and studying of the maximum capacity between Pasila-Helsinki. The Study was made as a part of the Action Improving punctuality and reliability of passenger train traffic (2011-FI-93125-S, 5,0 M€).

The additional track of Pasila
The functionality study of the main track (2007) and Simulation of the main track (2008)
The results of the functionality study were ensured by the simulation of the main track. The object of the study was to research how to increase the capacity and decrease sensibility to disturbance between Helsinki and Riihimäki. It was noticed that the main problems were the capacities of Pasila and Tikkurila depots.

The platform and capacity study of Pasila (2009)
The objective of the plan was to study the long-term objectives of the Pasila area. It was decided to study further the possibility to construct an additional western track.

The General Plan (2012) (*annex 16, report*)
The objective of the plan was to collect extensive background information for the Railway plan phase. In the plan preliminary alignment alternatives of the additional track were surveyed. The alternatives concerning bridges were compared (alternative 1: all the bridges will be repaired and painted, alternative 2: four western bridges will be renewed and the current maintenance track bridges will be repaired and painted, alternative 3: all the bridges will be renewed). The alternative 1 was studied further.

The Railway Plan (2014) (annex 17)
The Railway Plan includes planning of the new additional track, platforms, switches, track arrangements and bridges. The alternative track alternatives will be compared and the railway plan will be made of the chosen alignment. The Railway was made as a part of the Action "Planning of the railway section Helsinki–Riihimäki (2013-FI-12010-S, 2,46 M€)"

The Finnish Rail Authority has created freight traffic forecast for Finnish railway network for 2020 and 2030. It bases on analyses of existing freight flows, interviews of most important freight transport clients and analyses of existing trends in the business and political surrounding.

Freight traffic, domestic (million tonnes/a)

	current situation **2012**	project not implemented **2020**	project not implemented **2030**
Helsinki–Kerava	471	807	838
Kerava–Hyvinkää	500	1285	1443
Hyvinkää–Riihimäki	1600	2837	2773
Riihimäki–Lahti	2520	4340	3877
Riihimäki–Tampere	2719–3845	4646–5356	4295–5247

Long passenger traffic (million passengers/a)

	current situation **2012**	project not implemented **2035**
Helsinki–Kerava	6245	
Kerava–Riihimäki	4255	5701–8800

The functional improvement of the railway yard of Helsinki and the Helsinki Rail Loop is being planned in Action Improving punctuality and reliability of passenger train traffic 2011-FI-93125-S (completed by end of 2014). Planning of the railway section Helsinki–Riihimäki 2013-FI-12010-S consists of following studies (completed by end of 2015): The Railway Plan and Construction Plan of the additional track of Pasila.

5.4. Financial analysis

N/A for studies

See annex 21 for the cost-benefit analysis.
See annex 19 “General guidelines for the appraisal of transport network projects in Finland – Executive summary of the benefit-cost analysis”.

5.5. Social and economic impact

N/A for studies

5.6. Impact of the proposed Action on traffic management, congestion, modal split, inter-operability, service quality, safety and security

N/A for studies

5.7. Impact of the proposed Action on regional and / or local development and land use

N/A for studies

5.8. Impact on competition

N/A for studies

5.9. Impact on the environment

N/A for studies

6. QUALITY OF THE PROPOSED ACTION

The breakdown of eligible costs is part of the quality of the proposed action. As this information is provided in section A 3.3 of the Application Form it is not duplicated here.

6.1. Organisational structure

The contractual arrangements are described in 4.6.2 and 4.6.3.

The Helsinki Rail Loop

The steering group (meetings in every 2 months)

- FTA (chief director, project manager)
- the city of Helsinki, Helsinki City Transport
- the city of Helsinki, town office, financing
- the city of Helsinki, public works department
- Helsinki Region Transport
- developer consultant

The steering group decides on major technical solutions and definition of communications policy, supervises the risk management and costs and manages the project entity. The objective of meetings also is informing and hearing of the stakeholders. The meetings enable the stakeholder's participation to the decision making.

The key persons of the FTA

- project manager Jussi Lindberg
- project engineer Marja Wuori
- Geotechnics Panu Tolla
- Maintenance Eero Liehu
- Structures Antti Rytkönen
- Passenger information systems Kimmo Turunen
- Safety devices, N.N.
- Other experts

Finnish Transport Agency (FTA) is the client for the project and responsible for the projects. The project manager answers that practical matters proceed according to the project plan. The project manager takes care of management and directing of the consultants in meetings by commenting on drafts of the plans and presented solutions. The experts of the FTA evaluate the quality of the plans during the planning process on their behalf and supervise that the interests of their expertise area are taken into consideration.

Project group (meetings in every 2-3 months)
The project group (the representatives from FTA and the city of Helsinki) supports the project manager in the project management and decisions concerning technical solutions.

Planning meetings (once a month)
All the planning consultants participate in planning meetings (guidance of the planning, coordinating between plans, technical feasibility of the plans, cost calculation, the proceeding of the planning, risk management and quality, instructions of the client.

The project management group (meetings in every 2-3 months)

- FTA
- the city of Helsinki
- the city of Helsinki, public works department
- the city of Helsinki, real estate department
- Helsinki Region Transport
- VR; traffic contractor
- Finnish Transport Safety Agency
- Senate properties

The project management group decides on between alternative choices, gives presentations to the steering group. The group is also an information channel of the stakeholders.

The Helsinki railway yard

Key persons of the Finnish Transport

- Project Manager; construction of switches N.N
- Project Manager; safety devices N.N
- Traffic management, N.N
- electrified track, N.N
- Safety devices, N.N.
- Maintenance, N.N
- Structures
- Other experts

Finnish Transport Agency (FTA) is the client for the project and responsible for the projects. The project manager answers that practical matters proceed according to the project plan. The project manager takes care of management and directing of the consultants in meetings by commenting on drafts of the plans and presented solutions. The experts of the FTA evaluate the quality of the plans during the planning process on their behalf and supervise that the interests of their expertise area are taken into consideration.

The steering group group, see the additional track of Pasila

Planning meetings

- Project Manager; construction of switches N.N
- Project Manager; safety devices N.N
- Other experts of FTA
- Developer consultants
- inspection consultants
- planning consultants
- ISA, NoBo-consultants

The developer consultant is responsible of the management, proceeding of the construction process and communication to the client. The developer consultant works as an evaluator of the work. Meetings are held meetings once a month where the progress of the work, scheduling of the planning and the costs are being evaluated and monitored. The co-operation of the between the projects is discussed and accepted in these meetings. Also the contract situation is controlled in the meetings.

The additional track of Pasila

The key persons of the Finnish Transport Agency

- Jarmo Nirhamo, project manager
- Kari Ruohonen; director
- Mikko Heiskanen, construction
- Pekka Rautoja, electricity
- Jorma Laaksonen, traffic management
- Marja Wuori, project engineer

Finnish Transport Agency (FTA) is the client for the project and responsible for the projects. The project manager answers that practical matters proceed according to the project plan. The project manager takes care of management and directing of the consultants in meetings. The experts of the FTA evaluate the quality of the work during the process on their behalf and supervise that the interests of their expertise area are taken into consideration.

The steering group group (3-4 times a year)
The co-operation group partipate if there is a need to achieve mutual understanding concerning contracts and other matters. The co-operation group:

- FTA, Kari Ruohonen
- YIT Rakennus Ltd; Tero Kiviniemi and Tapio Salo
- Senate Properties; Heikki Laitakari and Antti Kari
- Helsinki Region Transport; Tero Anttila (planning of the public transport)
- The City of Helsinki; Jaakko Stauffer (Real Estate Office), Pasi Lehtiö (Real Estate Office), Osmo Torvinen (city engineer's office), Mikko Aho (city planning), Niina Puumalainen (city secretariat), Mikko Aho (city planning)

The steering group decides on major technical solutions and definition of communications policy, supervises the risk management and costs and manages the project entity. The objective of meetings also is informing and hearing of the stakeholders. The meetings enable the stakeholder's participation to the decision making. The drafts of the plans and their effects are discussed in the meetings, as well as the proceeding of the planning, costs and timetable. The close co-operation in the planning phase ensures the fluent acceptance of the plans.

The steering group of the FTA (meetings in every 2 months)
Steering group of FTA consists of the FTA's experts of different kind of expertise areas. The aim of the group is mainly informing.

The Project group (once a month)

- FTA, project manager, Jarmo Nirhamo
- YIT Rakennus Ltd (construction firm of Central-Pasila); Tapio Salo, Jarkko Pakkala, Jere Keskinen, Tero Salmi, Merja Vainikka
- Senate properties; SiniKössi and Antti Kari
- Helsinki Region Transport; Arttu Kuukankorpi
- HKL; Artturi Lähdetie
- The City of Helsinki; Pasi Lehtiö / Elina Kuikanmäki (Real Estate Office), Jarkko Karttunen / Peter Henny (city engineer's office), Niina Puumalainen / Petri Hoppula (city secretariat), Dan Mollgren (city planning office), and Harri Verkamo (city planning, traffic)

The Project group supervises that the development consent and the decisions made in the contract is followed. The Project group accepts the issues concerning the entity of the Central Pasila and works as a cooperation and coordination group.

Planning meetings (once a month)

- FTA, project manager Jarmo Nirhamo
- The developer consultant, Jenni Matikka / Sweco
- Project manager of sub consultant Ari Savolainen /Sito Ltd
- Structure planning Ahti Rantonen /Sweco
- YIT, Jere Keskinen, planning of the 1st phase
- N.N. planning of the 2nd phase
- Architect Vesa-Pekka Erikkilä; project manager
- experts of FTA

The developer consultant is responsible of the management, proceeding of the construction process and communication to the client. The developer consultant works as an evaluator of the work. Meetings are held meetings once a month where the progress of the work and the costs are being evaluated and monitored. The co-operation of the between the projects is discussed and accepted in these meetings. Also the contract situation is controlled in the meetings.

Risk management meetings (once a month)

- FTA, project manager Jarmo Nirhamo
- FTA, Outi Lehtonen
- The developer consultant, Jenni Matikka / Sweco
- structure planning Ahti Rantonen /Sweco
- The risk management consultant Simo Sauni and Jaana Ojala, Ramboll
- Constructor, YIT; Timo Leppänen and Jarkko Ilkka
- The risk management consultant of the YIT, Laura Järvinen
- The representatives of the city of Helsinki; Markku Riekko, Niina Puumalainen, Anniina Mattson,
- consultants

6.2. Control procedures and quality management during implementation

Control procedures and quality management in general

The FTA draws up a planning program where the planning standards and criteria for the quality management are defined. It is required that the planning consultants have a certified quality system which is followed in the planning process. The consultant will draw up at the tendering phase or in beginning of the work a project-specific quality plan which will be evaluated by the FTA. In the quality plan, it must be explained how:

- it is ensured that the planning solutions and their technical quality corresponds to the objective of the client
- the presented plans are put into practise
- to keep up the schedule and cost estimate
- the work safety will be ensured

The Finnish Transport Agency will nominate a skilled official who will be responsible for managing and controlling the project. This FTA's project leader works in close co-operation with the project manager organization. Project managers of the FTA are responsible for the quality of plan and planning process. The experts of the FTA evaluate the quality of the plans during the planning process on their behalf. Quality control is made according project plan. The realization of the quality plan will be followed in the project meetings. Internal audit is done continuously by the project managers of the client and consultant.

The monitoring of the project is based on regular project management meetings and project progress reporting which are conducted with the Finnish Transport Agency's nominated project manager and the project management organization. These meetings and reports compare the project achievements (use of resources, sections under constructions etc.) and use of money with the planned timetable and cost estimates. Consultant reports about projects progress, timetable and costs to the project manager of FTA. Financial issues and technical proceeding of the project are checked in frequent project meetings. The financial issues are controlled with FTA internal financial controlling routines. Any unexpected or other significant issues related to the project are handled as well.

The Finnish Transport Agency is responsible for the practical project execution and the Ministry monitors progress of each project via normal result control procedures. FTA reports to the Ministry semi-annually in context of financial statements how project has progressed technically and financially. The Ministry also gives feedback and comments semi-annually on that reporting.

The Helsinki Rail Loop

The developer consultant supervises and guides the proceeding of the planning work and follows up of the costs. Midterm meetings are held twice a year. The Construction Plan will be delivered to FTA for the inspection of the Finnish Transport Agency (FTA) and the plan will be finalized after that. The plan will be accepted by the FTA.

The Construction planning of the Helsinki railway yard

The developer and inspection consultants supervise and guide proceeding of the work constantly and accept the completed plans. The plans will be evaluated by the Independent Safety Assessor (ISA) –consultant in order to confirm that plans qualify for requirements. (It is possible that the work will be evaluated by the Notified Body in order to confirm that the work quality for requirements.) The Finnish Transport Agency (FTA) accepts the plan (final financial review).

Construction Plan of the additional track of Pasila 2nd phase

The planning process will be constantly monitored and guided by the developer consultant. The project manager of the Finnish Transport Agency (FTA) is responsible for the project. The plan will be approved by the FTA. There is no administrative acceptance procedure. The plan will be evaluated by the Independent Safety Assessor (ISA) and Notified Body -consultants in order to confirm that the plan qualify for requirements.

6.3. Risk management methods and procedures

The risk management in general

The risk management will be done according to the guidelines of the FTA. Methods used in the risk control management are according to the instruction “Risk management in the track planning” of the Finnish Transport Agency. Special emphasis is given to safety management as a part of risk management, as well as the adoption of the Railway Safety Directive (Directive 2004/49/EC) “Common Safety Methods” assessment of risks.

The risks are identified, estimated and mitigated by the planning. The risks are discussed in all meetings. Major risks are discussed in steering group. A risk matrix will be created where the interaction of the probability of the seriousness and the risk was estimated. The impacts of realized risks will be defined from level 1 (extremely small impact) to level 5 (extremely strong impact). Probability, consequences, seriousness of the risk and interaction of each risk will be evaluated. The seriousness of the risk has five categories (1 insignificant, 2 minor, 3 moderate, 4 significant, 5 unbearable). The risks are re-evaluated since their probabilities and seriousness may change in time. Also the mitigation measures and follow-up means are checked. The risk matrix will be updated in the Construction planning phase. See 2.9. and 4.7 for risks.
The project manager of the Finnish Transport Agency (FTA) is responsible for the project. Project manager of the FTA is also responsible for the quality of plan and planning process. In acceptance inspection of the FTA, the work is received and made sure that it has been well done.

The monitoring of the project is based on regular project progress reporting which are conducted with the Finnish Transport Agency’s nominated project manager and the project management organization. These meetings and reports compare the project achievements (use of resources, sections under constructions etc.) and use of money with the planned timetable and cost estimates. Any unexpected or other significant issues related to the project are handled as well. Internal audit is done continuously by the project manager and the experts of FTA.

Financial issues and technical proceeding of the project are checked in frequent site meetings. The financial issues are controlled with FTA internal financial controlling routines. The Finnish Transport Agency has nominated a skilled official who is responsible for managing and controlling the project. This FTA’s project leader works in close co-operation with the project manager organization.

The Finnish Transport Agency is responsible for the practical project execution and the Ministry monitors progress of each project via normal result control procedures. FTA reports to the Ministry semi-annually in context of financial statements how project has progressed technically and financially. The Ministry also gives feedback and comments semi-annually on that reporting. The state has allocated funding complete the Action so there is no financial risk. The organization is well defined. There are no political, institutional, social and/or, technical risks.

The Helsinki Rail Loop (activities 1–6)

The planning process of the Helsinki Rail Loop will be constantly monitored by the developer consultant. The developer consultant for controls and reports of the proceeding, costs and schedule of the project to the project manager of FTA. The planning consultants are responsible for the planning and coordination of the plans. There is also risk management consultant draws up a risk management plan, organizes the risk management of the planning, evaluates the impact of the risks and reports to the project organization. The risks are also evaluated in workshops. The risks are discussed in all meetings. Major risks are discussed in steering group. Risk evaluation is made concerning for example track or structural planning or concerning certain geographical areas. The risks are entered into the risk database.

The Construction planning of the Helsinki railway yard (activity 7)

The developer and inspection consultants supervise proceeding of the work constantly and accept the completed plans. The plans will be evaluated by the Independent Safety Assessor (ISA) –consultant in order to confirm that plans qualify for requirements. (It is possible that the work will be evaluated by the Notified Body in order to confirm that the work quality for requirements.) The Finnish Transport Agency (FTA) accepts the plan (final financial review).

The risk management plan has been made and risk matrix made in earlier planning phases. There were nine recognized risks of which two were significant. The significant recognized risks concern certain guidelines of planning cannot be applied and the distance between signals is at minimum 400 metres. The risk was mitigated by brake testing.

Construction Plan of the additional track of Pasila 2nd phase (activity 8)
The developer consultant supervises the proceeding of the planning work. There is also risk management consultant draws up a risk management plan, organizes the risk management of the planning, evaluates the impact of the risks and reports to the project organization. The risks are discussed in all meetings. In addition there are risk management meetings once a month. See also 6.1. The plan will be evaluated by the Independent Safety Assessor (ISA) and Notified Body -consultants in order to confirm that the plan qualify for requirements. The plan will be approved by the FTA.

The risk matrix of the additional track of Pasila was updated in the Railway Plan phase. Five risk management workshops were held where the risk matrix will be updated. In addition five experts were interviewed. During the General planning phase 63 risks were recognized of which 34 were still relevant in the Railway planning phase. After completing Railway Plan still 28 risks were recognized. There were no unbearable risks but one significant risk. The significant recognized risk is that the structures of the station will collapse during construction. The risk is mitigated by planning prevention measures during the Construction Planning. The risk matrix will be updated in the Construction planning phase. In addition there were 15 risk that were seen as moderate.

6.4. Ex-post monitoring and audits

The monitoring of the project is based on regular project management meetings and project progress reporting which are conducted with the Finnish Transport Agency's nominated project manager and the project management organization. These meetings and reports compare the project achievements (use of resources, sections under constructions etc.) and use of money with the planned timetable and cost estimates. Any unexpected or other significant issues related to the project are handled as well.

The financial issues are controlled with FTA internal financial controlling routines. The Finnish Transport Agency has nominated a skilled official who is responsible for managing and controlling the project. This FTA's project leader works in close co-operation with the project manager organization.

The results of the Plans will be verified by the developer consultant. In acceptance inspection of the FTA, the work is received and made sure that it has been well done. If necessary, it will be supplemented in the construction phase.

The Ministry also requires that all the actions executed by the FTA will be externally audited before the final payment claim for the Commission is made.

6.5. Communication and visibility given to the CEF Transport co-financing

If TEN-T support is received, it will be advertised by using site notices and in the annual report by the Finnish Transport Agency. In addition to this the Ministry of Transport and Communications will prepare press release on the issue. Publicity requirements (EU-logo, financing statement and disclaimers) concerning the possible TEN-T support will be met by applying procedures defined in the webpage "Publicity guidelines and logos".

Public information is given frequently. The project has internet-pages where information is given and plans can be seen: www.fta.fi/city-rail www.liikennevirasto.fi/keskipasila www.liikennevirasto.fi/helra and on Facebook https://www.facebook.com/pisararata www.facebook.com/pasilauudistuu There will be also Internet-pages for the additional track of Pasila and the related Central-Pasila city centre block project. The project area is wide and related to one of Finland's largest construction projects ever implemented (Central-Pasila development where a whole new city block is built) so the visibility of the project will be high and it will be probable that it will receive a lot of media interest. In addition brochures have been made.

6.6. Other information

Provide any additional information which could be useful or should be taken into consideration during the evaluation. In particular, indicate if a proposal for this Action has already been submitted to the European Commission in a previous call.

7. ANNEXES

All relevant information for assessing the proposal must be provided in the Application Form. The purpose of annexes is to provide additional, supporting information. Annexes or their specific relevant sections should be referred to in the application's relevant parts

Annex 12. Map. Annex 13. GIS files Annex 14. The general plan of the Helsinki rail loop Annex 15. Study of the functional improvement of the railway yard of Helsinki Annex 16. The General Plan of the additional track of Pasila Annex 17. The Railway Plan of the additional track of Pasila Annex 18. General guidelines for the appraisal of transport network projects in Finland – Executive summary of the benefit-cost analysis Annex 19. The budget of 2012 Annex 20. The budget of 2014 Annex 21. The cost-benefit analysis