

## Finland Project Management Roundup



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### INTRODUCTION

This roundup continues the coverage of Project Management Association Finland, PMI Finland Chapter, and the key projects currently going on in Finland.

### PROJECT MANAGEMENT ASSOCIATION FINLAND

Project Management Association Finland (PMAF), **Projektiyhdistys ry** in Finnish, is a not-for-profit organization, and the International Project Management Association (IPMA) Member Association (MA) in Finland.



Founded in 1978, PMAF promotes the interaction, project-oriented thinking, and exchange and development of practical and theoretical knowledge among project management professionals with over 4000 members.

PMAF promotes the development and dissemination of project and project management knowledge. PMAF members are able to enjoy information sharing, workgroups, development projects, project management forums, conferences and certification services PMAF provides. PMAF organizes two annual conferences: *Project days* (*Projektipäivät* in Finnish) in early November, and *3PMO* in early June. *3PMO 2017* focuses on Project, Program and Portfolio Management Offices, and takes place at Tampere on June 6<sup>th</sup> 2017. Please navigate to [www.3pmo.fi](http://www.3pmo.fi), [www.projektipaivat.fi](http://www.projektipaivat.fi) and [www.pry.fi/en](http://www.pry.fi/en) for further information on PMAF and its main events.

## PMI FINLAND CHAPTER

PMI Finland Chapter is a not-for-profit organization providing project practitioners in Finland continuous learning, networking and community support. The Chapter was founded in 2005. Today, with more than 400 members, the chapter is increasingly recognized as place where its members can enhance their project management and leadership skills, as well as network with other project management professionals.



PMI Finland Chapter hosts a number of events such as Breakfast Round Tables, regular meetings taking place once a month in Helsinki and occasionally also in other locations. The chapter members have the opportunity to attend events for free or with a discount and the chapter sends its members a regular newsletter with localized content on project management. Additionally, the Chapter supports its members in their professional development and training.

PMI Chapter Finland has an annual tradition of organizing a conference in spring. In 2017 the conference will take place on May 10<sup>th</sup>, in Helsinki, with the overarching theme "Change!". Wärtsilä CEO Mr **Jaakko Eskola**, Kaidi CEO Mr **Carl Haglund** and IIL Senior Consultant & Coach Mrs **Jane Morgan** will be presenting at the event at HTC Helsinki. Please navigate to [www.conference.pmifinland.org](http://www.conference.pmifinland.org) for further information on the PMI Finland Chapter annual conference, and to [www.pmifinland.org](http://www.pmifinland.org) for further information on PMI Finland Chapter.

## OLKILUOTO 3

The 1 600 MW Olkiluoto 3 nuclear power plant, originally contracted to be built by consortium of **Areva** and **Siemens** for **Teollisuuden Voima (TVO)** at Olkiluoto, is currently proceeding through pre-commissioning trials and preparations: The simulator training of Olkiluoto 3 operating personnel is proceeding. Also, the trials with the diesel-powered seawater cooling system have been initiated.



*In the photograph: The Olkiluoto 3 training simulator (photo courtesy TVO)*

The third nuclear power unit to be constructed at Olkiluoto is expected to provide full power in commercial power production in late 2018 – assuming that the remaining works proceed as expected. Pre-production water trials are expected to start in April 2017; nuclear fuel is expected to be delivered to the plant in September 2017; the first fuel charge is expected to be loaded in the reactor in January 2018; the start-up is expected to be initiated in June 2018; the plant will commence commercial power generation in December 2018.

The Olkiluoto 3 project has suffered from a number of challenges throughout the lifecycle. An international court of arbitration settling Areva and TVO differences has published the final verdict on the differences between Areva and TVO. The project is currently nine years delayed from the original time schedule.

The contract for building the Olkiluoto 3 power plant was signed in 2003 for 3 000 M€, and construction began in 2005, targeting completion in June 2009. Due to numerous challenges during the planning and construction phases, the target date has been pushed forward several times, first to 2015, and now to 2018 – nine years in total. According to Areva, the delays have pushed the total cost up to 8 500 M€.

Areva and TVO have conducted negotiations regarding the delay and related penalties, with TVO demanding 2 300 M€ from Areva, and Areva 3 500 M€ from TVO: Areva claims TVO has not carried out its contractual duties, and is therefore accountable for the costs of the string of delays. TVO claims Areva has failed to construct the power plant according to the contractual schedule.

The matter is made more challenging by the French government plan to sell its majority share of Areva stock to *Électricité de France* (EDF) S.A. – the French electric utility company, largely owned by the French state, headquartered in Paris, France, with 65 200 M€ in revenues in 2010. EDF operates a diverse portfolio of over 120 GW of electrical power generation capacity in Europe, South America, North America, Asia, the Middle East and Africa. The French government would like to merge the loss-making Areva with EDF, however, EDF is unwilling to proceed with the proposed arrangement understanding the international arbitration may agree with TVO's claims.



*In the photograph: Practicing fuel rod handling – with non-nuclear rods (photo courtesy Areva)*

## HANHIKIVI 1

The preliminary construction works of the 1 200 MW Hanhikivi 1 nuclear power plant, contracted to be built by **Rosatom** for **Fennovoima** at Pyhäjoki, is proceeding despite the pending of the main building permit. The process of granting the main building permit is proceeding in the Finnish Ministry of Employment and the Economy.

*Säteilyturvakeskus*, the Finnish national Radiation and Nuclear Safety Authority announced in February 2017 that it has commissioned an external investigation of the safety culture at Fennovoima from *Teknologian tutkimuskeskus VTT*, the Technical Research Centre of Finland. Due to this investigation, *Säteilyturvakeskus* considers it unlikely for the Fennovoima main building permit to be granted before 2019. The Hanhikivi 1 plant will be of the same design as the new Sosnovyi Bor plant which is expected to be completed in May 2018 – three years behind the original time schedule.

Due to the EU sanctions towards Russia, the Hanhikivi 1 plant has become involved in international politics. Many see the Rosatom three-way involvement in the Hanhikivi 1 project – being one of the main shareholders as well as the main contractor and the main equipment supplier – as a way for Russia to get involved in EU matters. Some go as far as seeing the Rosatom involvement in the Hanhikivi 1 project as a way for Russia to strike a blow against a uniform EU sanction policy towards Russia. Setting aside the international politics, experts say the Hanhikivi 1 plant is unlikely to be able to produce electrical power at a price lower than the Teollisuuden Voima Olkiluoto 3 plant.

A preliminary approval to construct the plant was granted by the Finnish Government in April 2010, and by the Finnish Parliament in July 2010. The decision to invest in the power plant was made by Voimayhtiö SF, the largest owner of Fennovoima, in February 2014. The final permit to construct the plant – applied for by Fennovoima in June 2015 – is expected to be granted by the Finnish Government no earlier than 2018. The plant is expected to commence commercial power generation operation in 2024.

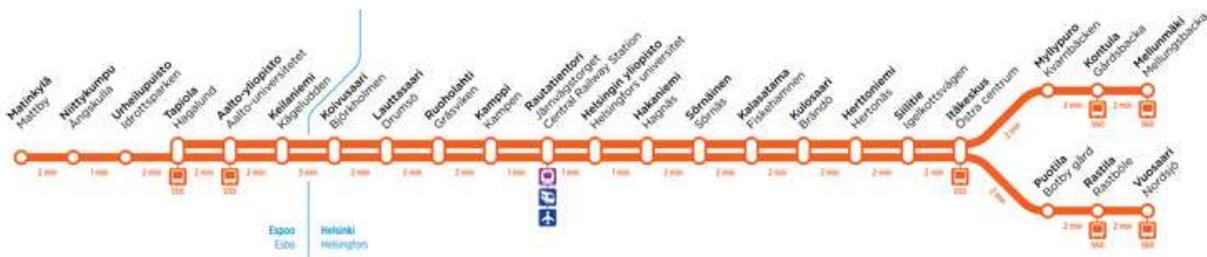
The plant will be constructed by Rosatom, and will use a pressurized water reactor. Rosatom – formally known as *Rosatom State Atomic Energy Corporation* – is a Russian state corporation, established in 2007, and the regulatory body of the Russian nuclear operations. 66% of Fennovoima is owned by the Finnish *Voimaosakeyhtiö SF*, and 34% by *RAOS Voima*, the Finnish subsidiary of Rosatom.

The plant is expected to generate approximately 10% of Finnish electricity demand. Rosatom has 34% ownership of the plant, which translates to Rosatom supplying 3% of Finland's electricity production according to Veli-Pekka Tynkkynen, professor of Russian energy politics at University of Helsinki. Professor Tynkkynen argues Russia may use its ownership of the plant to attempt manipulating Nordic power prices, or use it to leverage political disputes the same way Russia is already using its gas supply in disputes with neighboring countries such as Ukraine. Researcher Martin Kragh of Uppsala University in Sweden notes that Russia has already applied pressure to keep the Hanhikivi 1 project going by pressuring Fortum – a major player in the Finnish power business – to invest in the Hanhikivi 1 project through Voimaosakeyhtiö SF and to obtain a 6.6% share in the power plant. Fortum decision to invest in the project was critical, as a decision had been made earlier by the Finnish Government that a minimum of 60% ownership of the Hanhikivi 1 plant will need to be in Finland. The economic sanctions the EU has set upon Russia have not been imposed upon the Russian main contractor of the Hanhikivi 1 plant.

## LÄNSIMETRO

The first implementation phase of Länsimetro extension to the existing Helsinki metro system is currently proceeding through pre-commissioning trials and preparations. The latest expectation is that the extension will start commercial operation one year behind the original time schedule. A definite date when operations will commence has not been released. A public inquiry was implemented to identify the reasons for the first phase problems. The report contains information likely to damage and cause further losses to Länsimetro, for which reason it has been decided to conceal the report from the Finnish taxpayers paying the bill. Several experts - Mr Antero Alku more than others – have criticized the Länsimetro procurement practice of arranging a high number of bidding competitions, claiming that one single overarching turn-key delivery would have saved Finnish taxpayers 400 million Euro, and allowed starting operations according to the original time schedule.

The westward extension is to be established in two phases: The first phase of the extension will lengthen the existing line from *Ruoholahti* via the island of *Lauttasaari*, the *Aalto University Otaniemi* campus, and *Tapiola* to a new terminus at *Matinkylä*. The second phase of the extension will lengthen the line further from *Matinkylä* to *Kivenlahti*. Länsimetro project is undertaken by Länsimetro Ltd, a jointly founded a company, of which the city of Espoo owns 72%, and the City of Helsinki the remaining 28%.



*In the illustration: Helsinki metro system subsequent to the extension (illustration courtesy HSL)*

The first phase of the extension, a 13.5-kilometer (8.4 mi) route, was approved for construction in April 2007, and the construction began in November 2009. In February 2014, rock blasting was complete, and the fitting out of the tunnels and construction of the stations was ongoing. The extension first phase was planned to open on August 15<sup>th</sup> 2016, however, last minute delays have pushed the start of operations into 2017.

The first preliminary plans, made in 2000 and 2001, cited the cost of building the infrastructure for the metro extension to Matinkylä to 400 M€. When the Espoo city council approved the construction of the metro extension in 2004, the estimated cost was 452 M€. In September 2007, the estimated cost of the Länsimetro was at least 530 M€, and in December 2007, at least 600 M€ due to increased need for ground construction and security systems. By January 2008, the estimated cost had risen to over 800 M€, and by February 2014 to about 1 000 M€. As of today, the total cost is estimated at 1 088 M€ – over 150% more than the original cost estimate.

The second phase of the extension, a 7.4 kilometer (4.7 mi) route was approved for construction in February 2014, and the construction began flexibly as the work on the first phase was being completed. The second phase of the westward metro extension runs entirely within Espoo city limits. The second phase of the extension is planned to be completed in 2020. The estimated cost of the second phase is 801 M€ as of 2013.

## RAIDE-JOKERI

The Raide-Jokeri light rail transit system – similar to the *Metro Blue Line* light rail in Minneapolis, Minnesota, US, and the *Metrolink* in Manchester, England – is planned for the metropolitan Helsinki area to complement the existing public transit service. Raide-Jokeri will connect two Helsinki metro stations – *Itäkeskus* in eastern Helsinki, and *Keilaniemi* in the eastern Espoo – to one another with 25 km of street-level double track and 33 stops. Raide-Jokeri will replace bus line 550, which is currently the most heavily congested line in metropolitan Helsinki area, in 2021. The new light rail transit system is intended to enhance the reliability and travel comfort of the transverse public transportation i.e. traffic in the areas surrounding the immediate downtown Helsinki.

The bidding competitions for the Raide-Jokeri infrastructure contracts are currently proceeding with the alliance method of contracting. The alliance method expected to provide better results than the traditional way of contracting - which has been identified one of the main reasons for the trouble in the Olkiluoto 3 and the Länsimetro projects.



*In the illustration: An artist's view of Raide-Jokeri rolling stock (illustration courtesy HSL)*

The first idea of a transverse light rail transit system was introduced in 1990, and it was agreed to be one of the next-generation public transit systems to be constructed in 1994. Instead of a light rail system, the transverse connection was established with bus service in 2006. The number of passengers has grown enormously, and bus connection 550 along the proposed path of the Raide-Jokeri route is currently the most popular bus service offered by Helsinki Regional Transport Authority. Due to the increasing traffic, and need for quick and reliable connection, the plan to establish the originally proposed light rail transit system has been approved by the city of Helsinki as well as the city of Espoo. The budget for construction of the Raide-Jokeri infrastructure was originally 275 M€, however, the figure has been pushed up to 459 M€ before construction has started.

## About the Author



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**Jouko Vaskimo** is an International Correspondent and Senior Contributing Editor for **PM World** in Finland. Jouko graduated M.Sc. (Tech.) from Helsinki University of Technology in 1992, and D.Sc. (Tech.) from Aalto University in 2016. He has held several project management related positions with increasing levels for responsibility. Jouko holds a number of professional certificates in the field of project management, such as the IPMA Level C (Project Manager), IPMA Level B (Senior Project Manager), PMP, PRINCE2 Foundation, and PRINCE2 Practitioner. Jouko is also a Certified Scrum Master and SAFe Agilist. Jouko is a member of the Project Management Association Finland, a founding member of PMI Finland Chapter, and the immediate past chairman of the Finnish IPMA Certification Body operating IPMA certification in Finland. Since October 2007, he has been heading the Finnish delegation to ISO/TC 258. Jouko resides in Espoo, Finland and can be best contacted at [jouko.vaskimo@aalto.fi](mailto:jouko.vaskimo@aalto.fi). For more information please navigate to [www.linkedin.com/in/jouko-vaskimo-6285b51](http://www.linkedin.com/in/jouko-vaskimo-6285b51).