

# History and future of natural stones in architecture (NaStA)

A bridge between South East Finland and Russia

## City construction

Granite is used extensively nowadays for decorative and practical purposes in buildings, bridges, paving, monuments, and many other outdoor urban projects, as well as in renovating historical heritage sites. Stone plays a special role in the improvement of the urban environment—it is used in architecture, city design, decorating parks and squares. Granite products are durable, with noble character and it is difficult to conceive of a more reliable and beautiful material for decorating streets, parks and gardens.

## Further information

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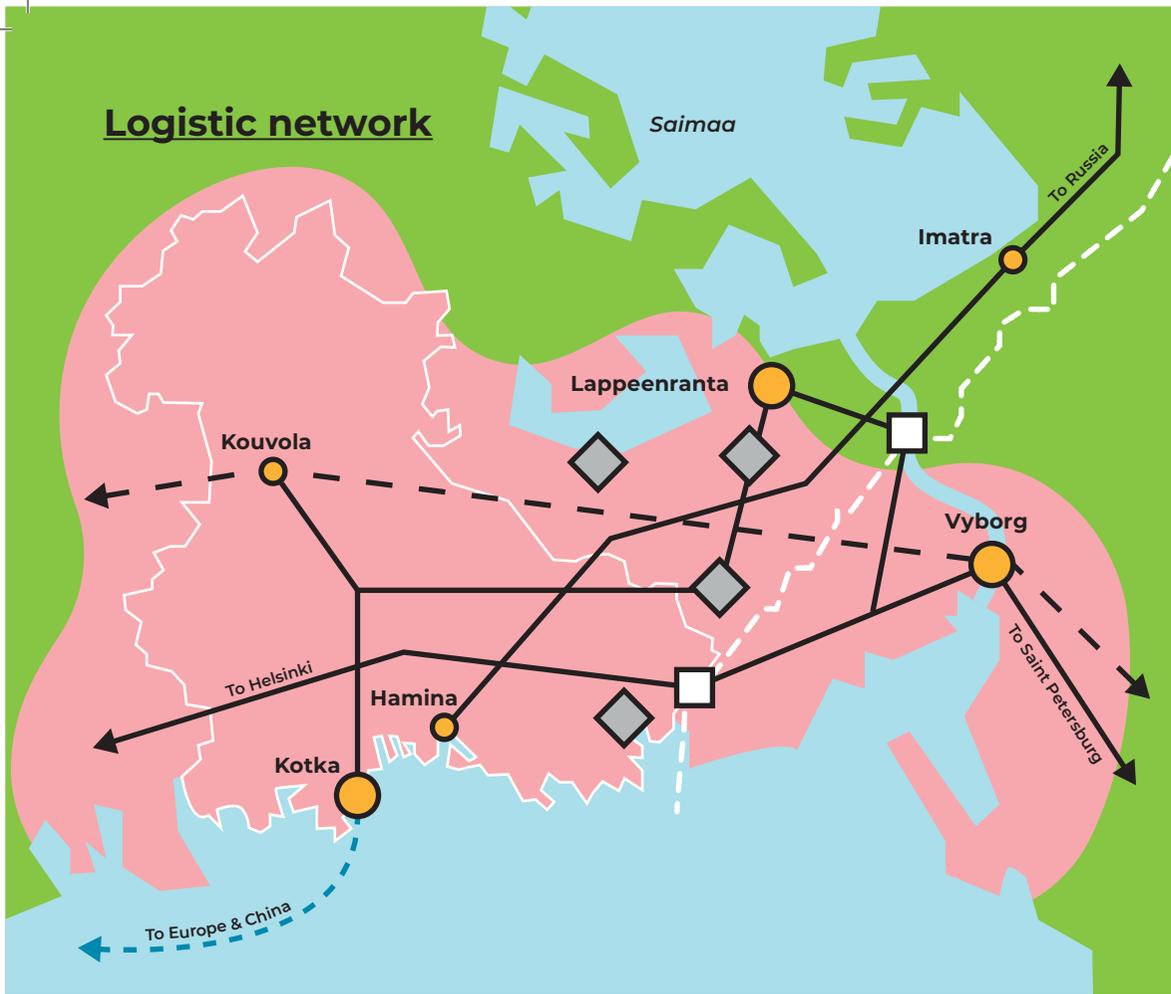
## Project partners

- Lead partner: Geological Survey of Finland
- Partners: South-Eastern Finland University of Applied Sciences (Xamk)
- Lappeenranta University of Technology (LUT)

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- Road
- - - Rail road
- · · Sea transport
- International border
- Border crossing
- City
- ◆ Quarry
- Granite

**NaSta provides support for the natural stone industry and cross-border market chains, taking into account geology, production, applications, and traditions. The project assesses new business opportunities with project stakeholders in the project area, in order to initiate and facilitate cross border business relations.**

**The primary aim of the Nasta project is to open new business opportunities and prospects for granite from south-eastern Finland.**

### Logistics

As a producer of natural stone, Finland is ranked globally amongst the major countries, and as an exporter of granite it is among the 10<sup>th</sup> leading countries. Exports of natural stone, in the form of blocks, slabs, paving stones and polished tiles, are of great important role to the Finnish natural stone industry.

The natural stone quarries of South-Eastern Finland are ideally placed from a transport logistics viewpoint due to the modern harbour facilities at the port of HaminaKotka. The port of HaminaKotka is indeed Finland's largest general cargo port and in recent years, the volumes of natural stones passing through the port of HaminaKotka have varied between 10.000 and 40.000 tonnes annually. Granite blocks can be placed in containers and shipped further to Central European ports and to Far Eastern ports.

South-Eastern Finland also has the main railway hub in Northern Europe handling 10 million tons of freight annually. The well-developed road network in South-Eastern Finland is also a great advantage. In recent years, the exported volumes of Finnish granite transported by road to the Russian Federation have been of the order of about 2.000 tonnes annually. The transport infrastructure of Southeast Finland offers numerous opportunities for international trade. Transport infrastructure of Southeast Finland offers numerous opportunities for international trade.

### Documenting the diversity of granite varieties

Granite is an enduring, durable building material in terms of both visual and physical properties. Red-colored granite stones are particularly favoured in the downtown areas. "Carmen red" became a traditional material as long ago as the 1760s. Nowadays, various reddish colored stones are popular: red-black migmatite "Aurora", red, granular red granite "Balmoral Red", Kotka red granite "Eagle Red", highland brown granite "Baltic Brown" and green granite "Baltic Green", for special purposes.

### Providing appropriate material for historical restoration

The historical centre of St. Petersburg is on the list of UNESCO World Heritage Sites. At the end of the 18<sup>th</sup> century red granite was imported to St. Petersburg from Finland and widely used in the construction of city quays and embankments. Red granite has also been used extensively in St. Petersburg for bridge, canal and street paving. The embankments of the Neva River, the pillars of Saint Isaac's Cathedral and the monolith of the Alexander Column, dedicated to Tsar Alexander I, are some of the best-known and prominent examples of the constructions using granite from Finland.