



COMPETITIVENESS AND PRODUCTIVITY OF THE FINNISH MINERAL CLUSTER

Ph.D., Associate Prof. Joonas Hokkanen

M.Sc. (tech.) Heikki Savikko

ME-INFO (TUKES, GTK MALMINETSINTÄINFO)

19.5.2020

RAMBOLL

RESEARCH QUESTIONS

1. National geodatabase

- What kind of added value does the national geoinformation give to society and the mining industry quantitatively and qualitatively?
- What are the current and potential cost savings due to utilization of geoinformation?
- What is the impact on the number of new investments (e.g. ore exploration/mining activities)?
- What is the significance of this for scientific research?
- What is the impact and economic value of geoinformation? How could its future value be further enhanced in a cost-effective manner?
- How are similar data utilized in other countries?
- What are the possibilities to utilize the data in e.g. environmental monitoring?

2. Mineral cluster

- Interactions and relations between mineral cluster sectors
- Local, regional and national economic impacts
- Most important factors in competitiveness and productivity
- The impacts of the National Mineral Strategy and Action Plan on the development of the mineral cluster
- International benchmarking
- Mineral material reserves as a part of circular economy (use and potential)

MINERAL CLUSTER

INDUSTRIES BELONGING TO THE MINERAL CLUSTER

07-09 Mining and quarrying

- 072 Mining of non-ferrous metal ores
- 081 Quarrying of stone, sand and clay
- 089 Mining and quarrying n.e.c (excludes extraction of peat)
- 099 Support activities for other mining and quarrying

24 Manufacture of basic metals

- 241 Manufacture of basic iron and steel and of ferro-alloys
- 242 Manufacture of tubes, pipes, hollow profiles and related fittings, of steel
- 243 Manufacture of other products of first processing of steel
- 244 Manufacture of basic precious and other non-ferrous metals
- 245 Casting of metals

28920 Manufacture of machinery for mining, quarrying and construction

MINERAL ECOSYSTEM

Research

Education

Administration

CURRENT STATE AND INTERDEPENDENCIES OF THE MINERAL CLUSTER

DIRECT IMPACTS OF MINERAL CLUSTER IN 2015

Manufacture
of machinery
and
equipment

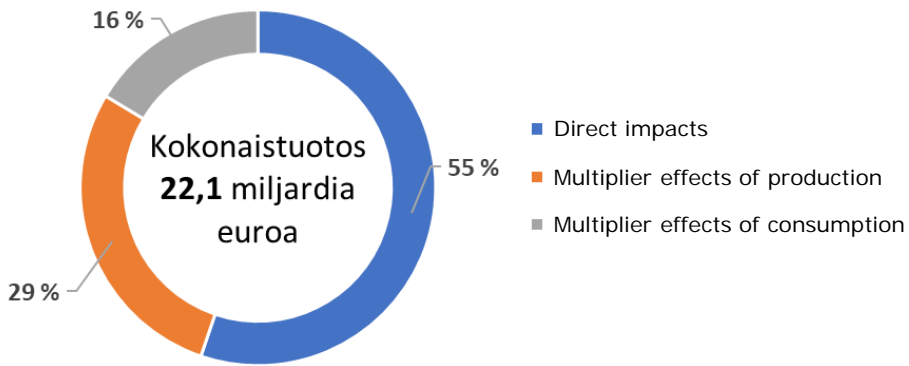
Mineral cluster

→ Turnover 12,2 billion €

→ Value added 2,9 billion €

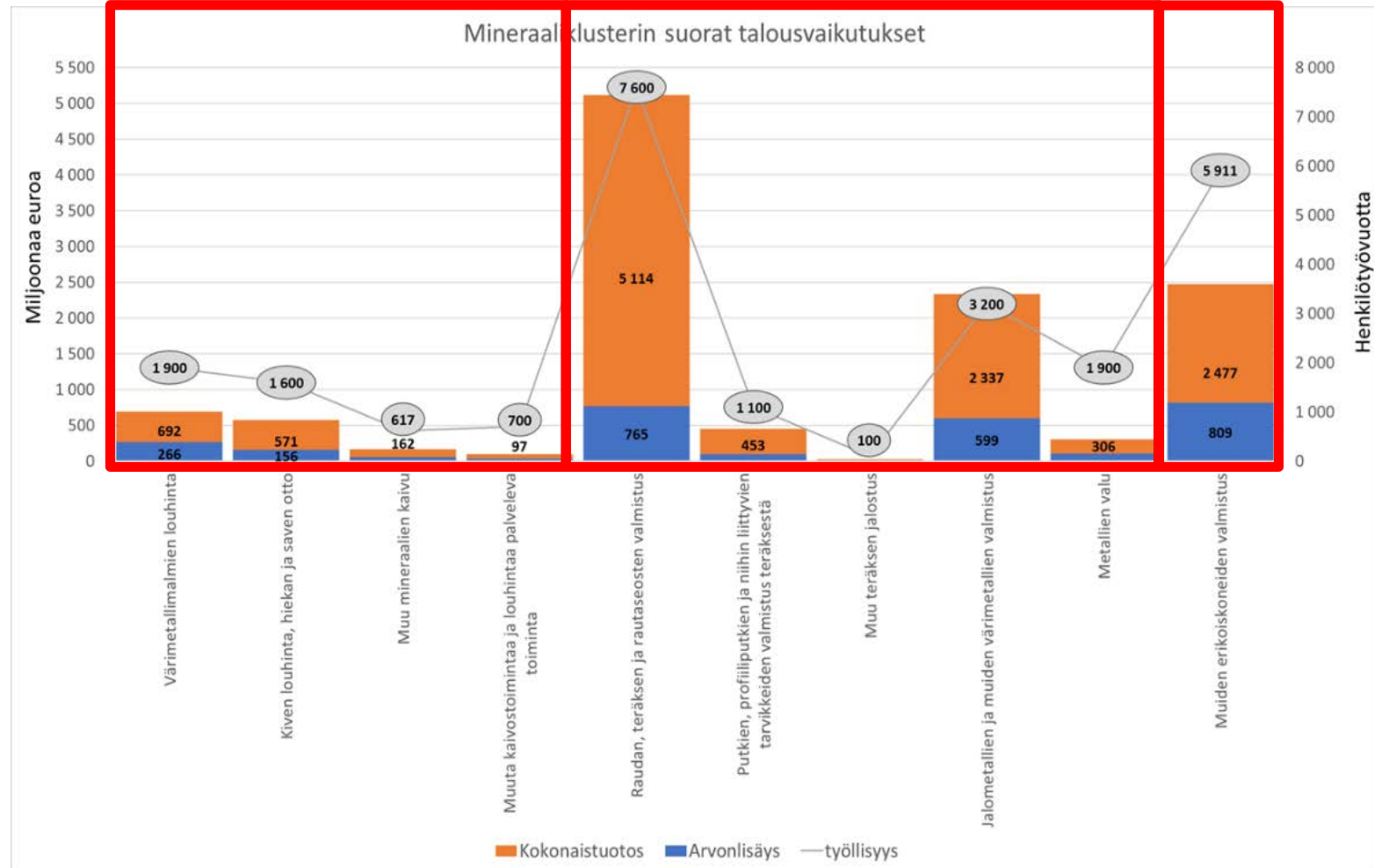
→ Employment 24 600 man-year

Turnover



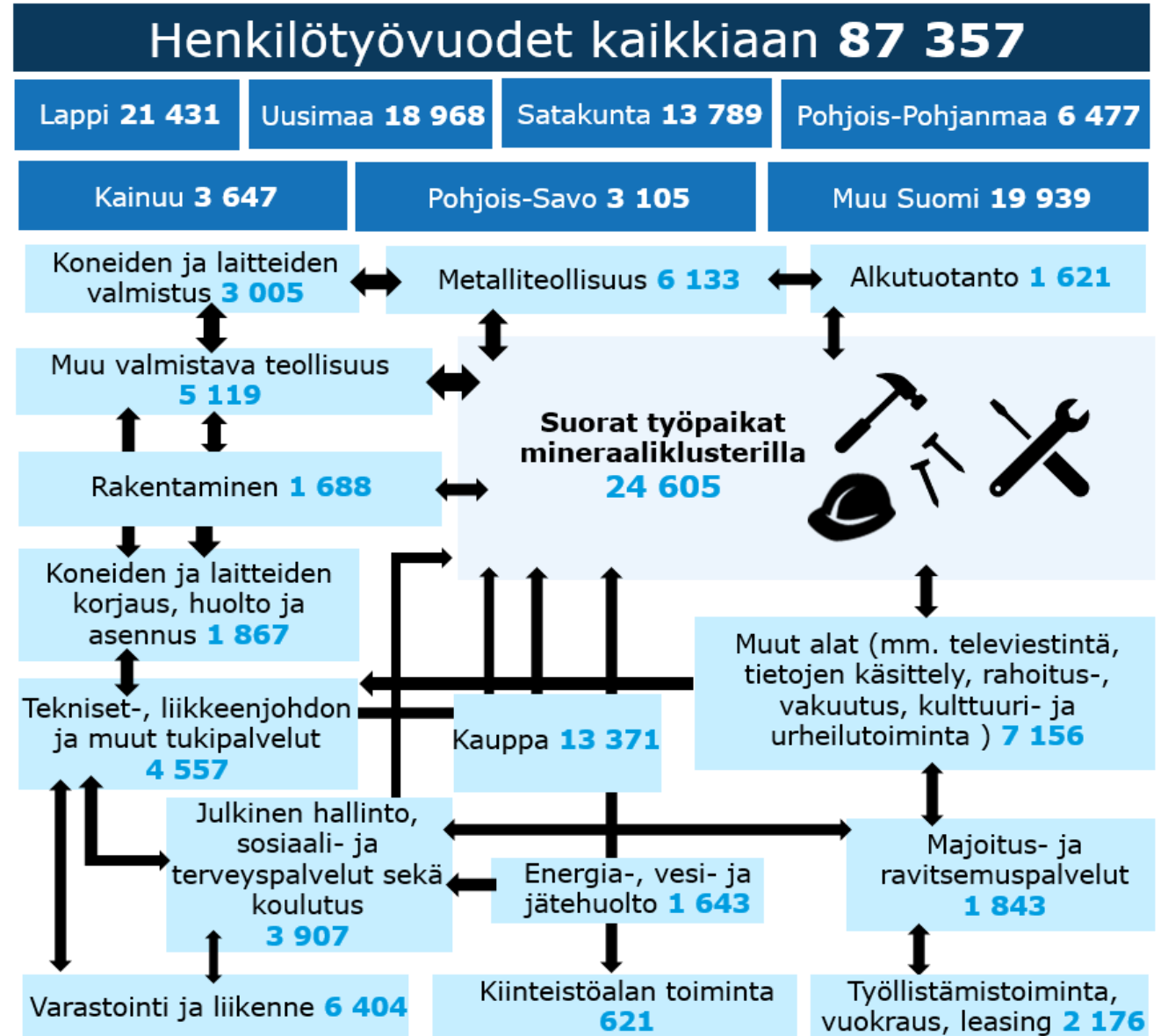
RAMBOLL

Mining and quarrying Manufacture of basic metals equipment

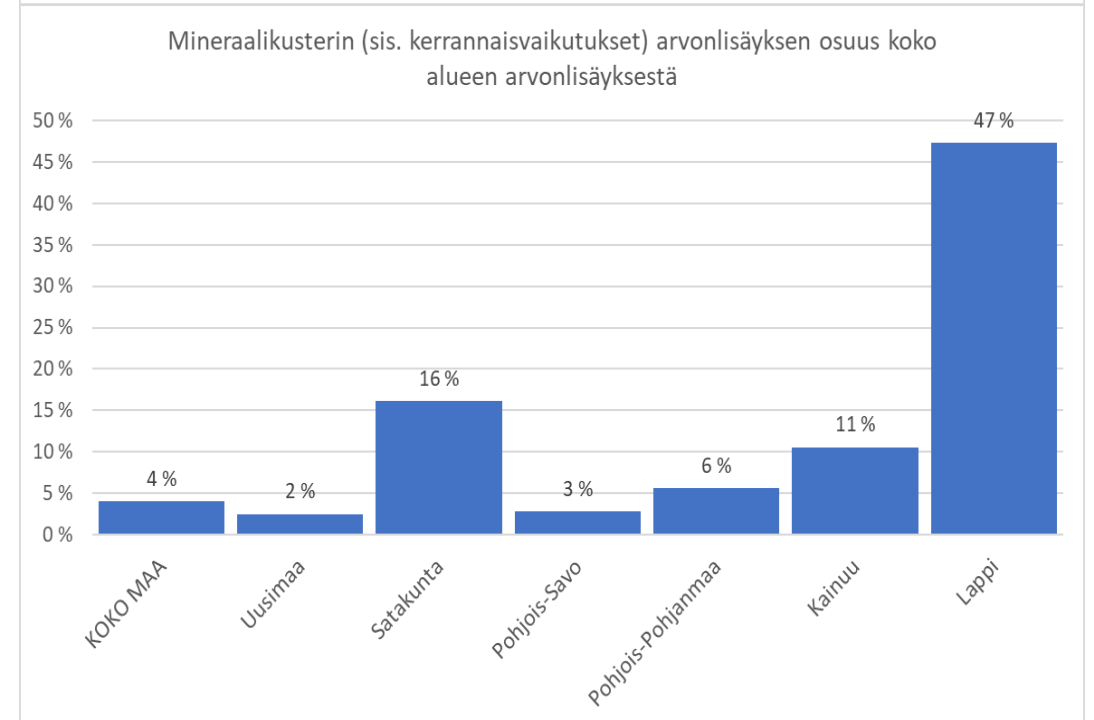
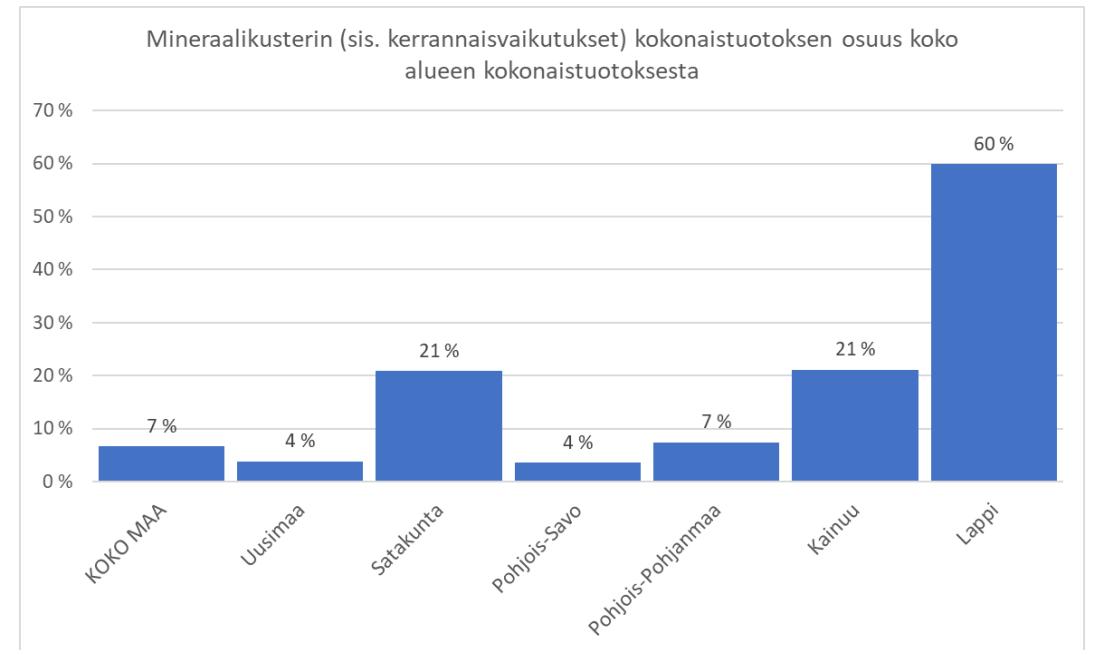
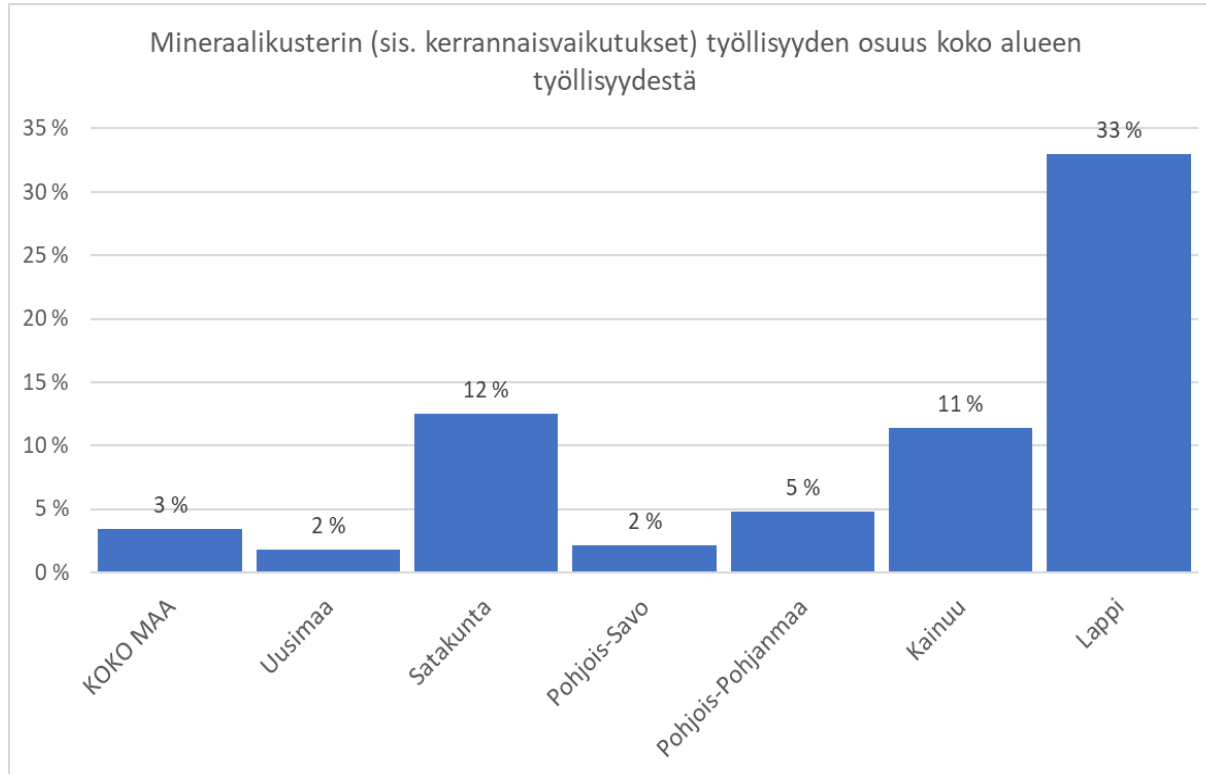


EMPLOYMENT DEPENDENCIES AND EFFECTIVENESS IN 2015

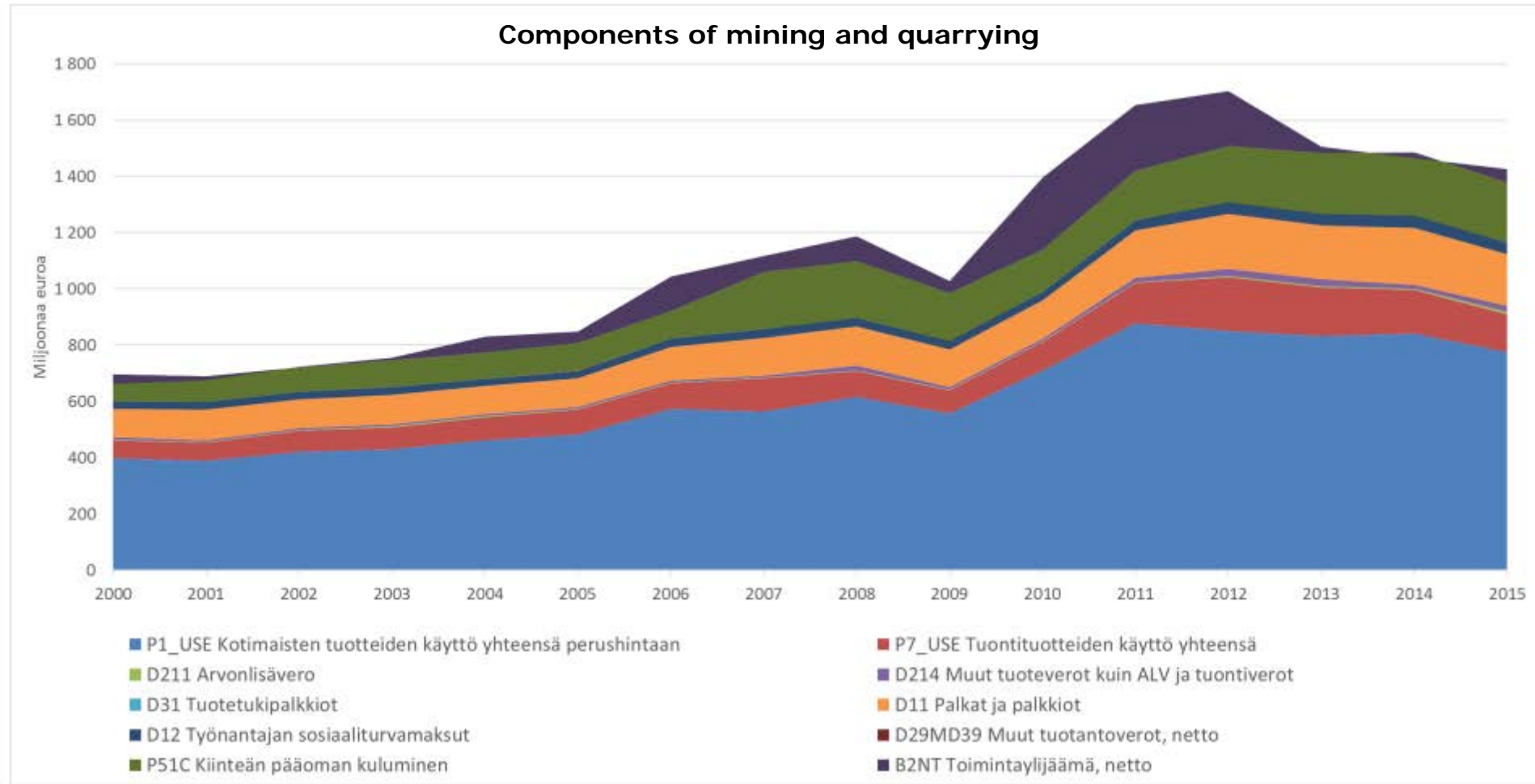
- The employment effects of the mineral cluster are very comprehensive in a number of different industries and generate significant multiplier effects.
- One direct job in a mineral cluster creates **4 jobs** throughout the whole value chain.



REGIONAL IMPACTS



COMPONENTS OF MINING AND QUARRYING



INTERNATIONAL BENCHMARKING



THANK YOU



JOONAS HOKKANEN
SENIOR CONSULTANT, PHD, ASSOCIATE PROF.

+358 400 355 260
joonas.hokkanen@ramboll.fi
Ylistönmäentie 26, 40500 Jyväskylä | Finland



HEIKKI SAVIKKO
CONSULTANT, M.SC. (TECH.)

+358 40 124 1194
heikki.savikko@ramboll.fi
PL 718, Pakkahuoneenaukio 2, 33101 Tampere | Finland