

V-LINC Analysis of Linkages in the Pyhäsalmi Mining Services Sector

INTRODUCTION

This study applies V-LINC (www.cit.ie/vlinc) a methodology which maps, visualises and analyses key relationship data collected from clustered firms, to inform strategy and policy development for the organisations involved, as well as catering for regional and national analysis to the mining sector companies in NIHAK region Finland. The project represents a collaboration between CIT, Ireland with the Kerttu Saalasti Institute, University of Oulu and Nihak Oy to provide input for the Anticipated Structural Change planning in Pyhäjärvi due to the closure of the Pyhäsalmi Mine in 2019. The study makes recommendations aimed at securing and growing the mining services sector in Pyhäsalmi.

The V-LINC methodology has been applied to a sample of mining services firms based in Pyhäsalmi. Thirteen companies were chosen to participate in the analysis, all Micro-Enterprises - (Konekorjaus Pyhäsalmi T:mi; M-Solutions Oy; Siiskosen Sora Oy; Pyhäjärven Konepalvelu Oy; Pyhäsalmen Metallityö Oy; Kone- Ja Rakennuspalvelu A. Kulju; Jus-Kar Oy; Maaselän Konetyö Oy; Sammutinpalvelu Saastamoinen Ky; Kuljetus Ari Pesonen Oy, Muon Solutions Oy, Pyhäsalmen Hiekkapuhallus T:mi and Tmi Raimo Rajaniemi). Thirteen face to face meetings were held with company personnel to gather information in regard to 175 strategic relationships that the respondent firms engage in. V-LINC assigns company linkages to one of eight categories. Besides linkages along the supply chain, namely those which provide Inputs and Specialist Services to firms, and Output linkages which provide markets for goods produced, V-LINC adds five other categories of linkages: those with Industry Peers, with Industry Associations, with Research & Development partners, with Training partners and with Government Agencies. Figure 1 displays all the linkages reported by the participant firms at the following geographic levels: Nihak = 64 links; Northern Ostrobothnia = 31 links; National = 72 links and International = 8 links).

Figure 1: Pyhäsalmi Mining Services Linkages by Geographic Scope.



Pyhäsalmi Mine is the second deepest metal mine in Europe, the zinc and copper mine is owned by First Quantum Minerals, a Canadian mining corporation. However, as the mine is a significant economic driver not only in terms of the jobs it creates directly but through its impact on employment in the services sector - the impact of its closure when its resources are depleted in September 2019 will be significant. As the Pyhäsalmi Mine prepares to close it is important that industry players, business support organisations and policy makers understand how the mining and services ecosystem operates both within the Nihak region as well as its external relationships forged beyond, so that collaboratively, they can deliver growth and employment through supportive policy.

HIGHLIGHTS OF the 2018 RESULTS

- Pyhäsalmi's mining services sector specialisation show strong connections locally with 55% of the 175 linkages operating within the Nihak and Northern Ostrobothnia regions. The remaining connections are reported at a National (40%) and International (5%) level.
- Regarding demand conditions, mining services sector firms in Pyhäsalmi are focused on the local market, customers are predominantly local to Pyhäsalmi (46%) and Northern Ostrobothnia (16%), with only one international customer reported - the rest (36%) are spread across Finland at a national level.
- It is apparent that the firms in mining services sector in Pyhäsalmi have some local suppliers of inputs. However, the majority of inputs are sourced from outside Nihak and Northern Ostrobothnia from national (47%) and international (11%) markets.
- While a large portion of mining services sector firms surveyed in Pyhäsalmi in do not compete directly with each other, there is also a degree of co-operation through local industry peer linkages (where all but two of the firms interviewed reported linkages in this category).
- R&D linkages were also sparse, with just 9 linkages reported - a mixture of connections with associations and firms. Only one R&D linkage from Pyhäsalmi exist with a university or research centre in Northern Ostrobothnia.
- The small numbers of Government Agency / Development Agency (n=11) and training linkages (n=7) reported by respondent firms in the Nihak and Northern Ostrobothnia regions, suggests that the micro-enterprises involved in the study may find it difficult or are adverse to engaging in such connections.
- Industry association linkages were the least frequent linkage category in the study, with just 5 linkages reported – this provides further evidence that firm's connections with others from an industry peer, training, research and development perspective are limited through reduced interaction with similar firms.

Key Connectors shared by the Pyhäsalmi Mining Services respondents.

Figure 2 illustrates the key connectors in the Pyhäsalmi Mining Services sector. The key connectors are those organisations who connect the sector. They are identified through the number of linkages they have with respondent firms and the importance of those linkages to respondents is reported in Table 1.

In terms of the key connectors identified, the strongest linkage is with the Pyhäsalmi Mine Oy. All respondents have a connection with the mine, predominantly as a customer but it also acts as a supplier and research partner in certain instances. All linkages to the mine are scored in the high and medium business importance bands. Other strong linkages are with the financial management services firms Salamen Tili and Pyhäjärven Monitoimihalli Oy, with whom all links again are reported in the High and Medium bands. Nihak Oy features with 4 connections as a development agency and a research partner. Finally the firm Pyhäsalmen Auto-Ja traktorihuolto Oy completes the list of key connectors as it provides machinery and repair services to three respondents in 2018.

Figure 2: Key Connectors Pyhäsalmi Mining Services Sector.

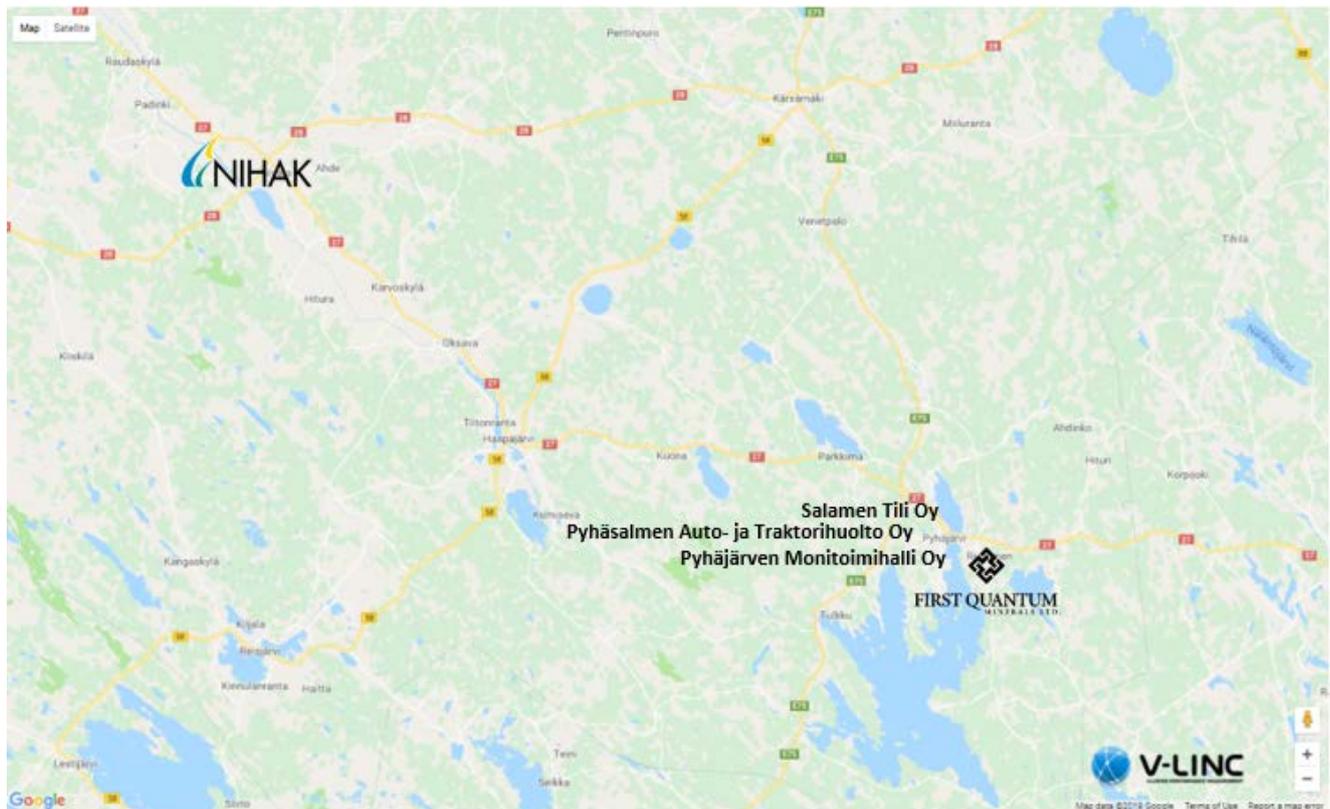


Table 1: Perceived Significance of Key Connectors Pyhäsalmi Mining Services Sector.

Key Connector		Pyhäsalmi Mine Oy	Salamen Tili	Nihak Oy	Pyhäjärven Tilitoimisto Oy	Pyhäsalmen Auto-Ja traktorihuolto Oy
High	30 to 40	54%	40%	50%	0%	0%
Medium	20 to 30	46%	60%	0%	100%	100%
Low	10 to 20	0%	0%	50%	0%	0%
Tenuous	0 to 10	0%	0%	0%	0%	0%
Total (n)		13	5	4	4	3
Linkage Category		11 OU, 1 IN, 1 RD	5 SS	3 GA, 1 RD	4 SS	4 IN

Projections to 2021 - Pyhäsalmi Mining Services

After conducting the traditional V-LINC analysis with the 13 respondent firms, the researchers asked the firms to consider the impact the closure of the Pyhäsalmi Mine would have on their business. To look beyond the closure to a January 2021 and to consider the portfolio of customers they would see replacing lost revenues. After identifying the ideal new output linkages – respondents were then asked what supplementary linkages would be needed to help them connect with these new customers, across the remaining 7 V-LINC categories.

In total 48 new strategic relationships were added for 2021 by the respondent firms. Figure 3 displays these new linkages reported by geographic levels: Nihak = 3 links; Northern Ostrobothnia = 10 links; National = 26 links and International = 9 links). Two items are of key significance from this data.

- Respondents recognise new external output connections are critical to their survival. Of the 48 new linkages reported 23 are to new customers. Of these potential new customers 61% are located across Finland and 22% have an international scope. New links are noticeable in Asia, Australia, Canada, Germany and Russia.
- The importance of specialist service (n=9), inputs (n=5) and government agencies (n=5) increases to the firms. Collectively the respondents view new marketing / logistics and HR recruitment (specialist services) as important to compete for new customers along with internationalisation support from Business Finland and the Ministry of Foreign Affairs (Government agencies) and the addition of new suppliers (Inputs) to make this transition.

Figure 3: Pyhäsalmi Mining Services Projected 2021 Linkages by Geographic Scope.



RECOMMENDATIONS

Having reviewed the Anticipated Structural Change planning in Pyhäjärvi, the following policies are suggested to support the development and re-alignment to external markets of the mining services sector in Pyhäsalmi.

1. It is evident that an opportunity exists to develop a cluster organisation to represent the mining services sector in Pyhäsalmi. This would require the provision of regional financial supports to allow the development of the functioning cluster organisation – and the appointment of a cluster manager whom could work on behalf of the member firms. Services to members could include but not be limited to the following – skills and training workshops, research and innovation seminars, networking events, promotion and PR of the mining services sector in Pyhäjärvi, internationalisation supports (i.e. representation at Trade Shows, market research and financing etc.).
2. An opportunity exists to develop export consortia through co-operation and collaboration between member firms where companies bring their product and service offering together to compete with larger suppliers. Such an initiative could give firms the capacity they need to compete with larger contractors and win new business to grow their portfolios and workforce.

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