

DRIVERS BEHIND INDUSTRIALISATION IN NORTHERN SWEDEN: PAST AND PRESENT PERSPECTIVES

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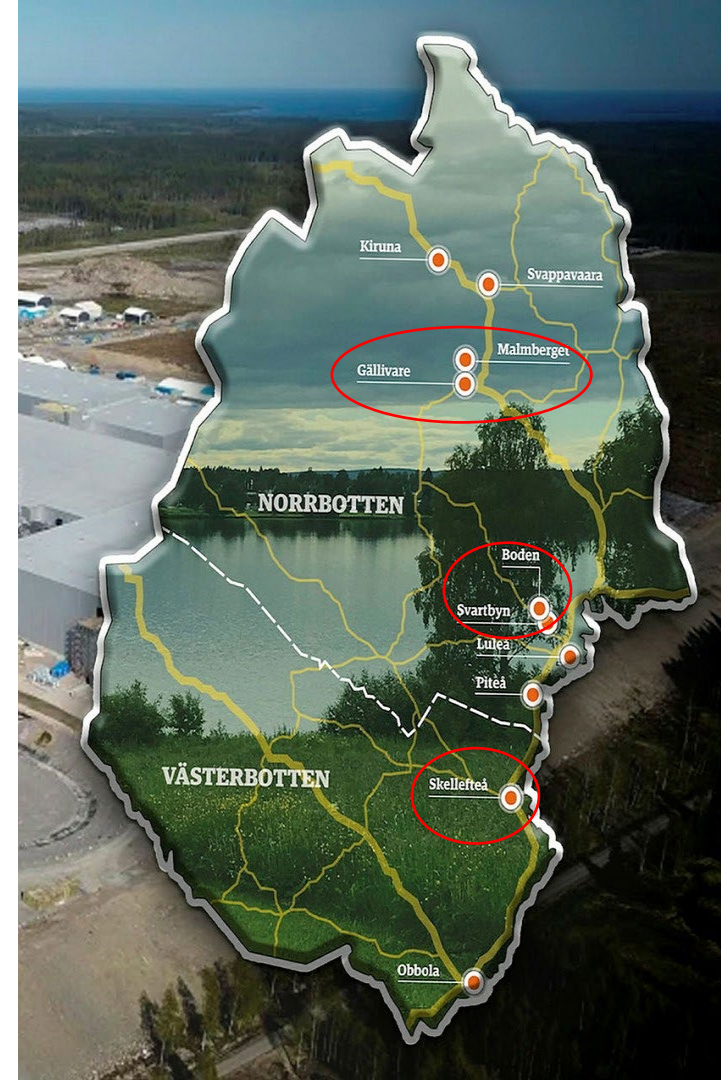
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UPPSALA
UNIVERSITET

- Projected investments around EUR 100-150 billion (ca 20% of Swedish GDP in 2021);
- Projected population growth on 100 000 for direct and indirect jobs (ca 20% increase);
 - *An extreme demand shock on labour;*
 - Pressure on incumbent firms and public sector (care, education etc);
- Electricity production in Norrbotten (alone) from 8 TWh (2019) to approximately 107 TWh 2050.



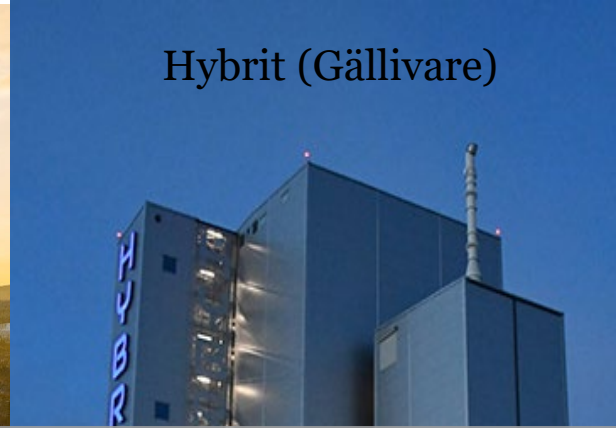
Northvolt (Skellefteå)



H2Green Steel (Boden)



Hybrit (Gällivare)



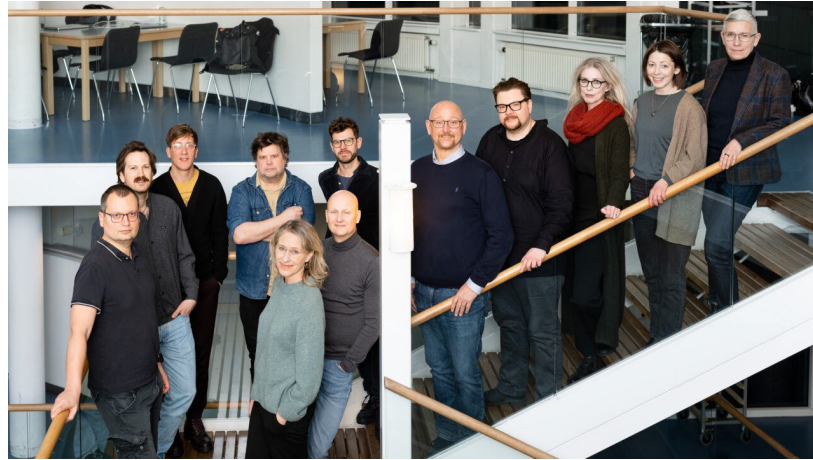
Is northern Sweden (Norrland) a scene for investments that make the region a leader in the response to climate change?

Are we witnessing a new industrial revolution?



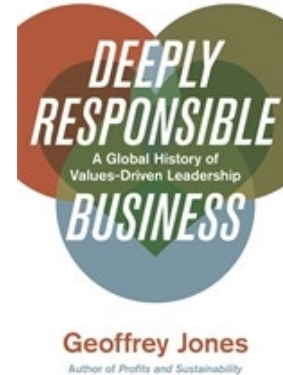
RESEARCH PROGRAMME 2023-2029

A PROMISED LAND? DRIVERS, CHALLENGES AND OPPORTUNITIES RELATED TO THE (GREEN) INDUSTRIALISATION OF NORTHERN SWEDEN



DRIVERS BEHIND THE CURRENT GREEN INVESTMENTS?

- Climate Policy
 - Paris Agreement
 - EU-ETS
 - EU Green Deal
 - National climate policies
- Global Competition
 - Race in global technological leadership. China, EU, United States?
- Values driven leadership?
 - What are the driving purposes behind the investments?



Harvard University Press (2023)

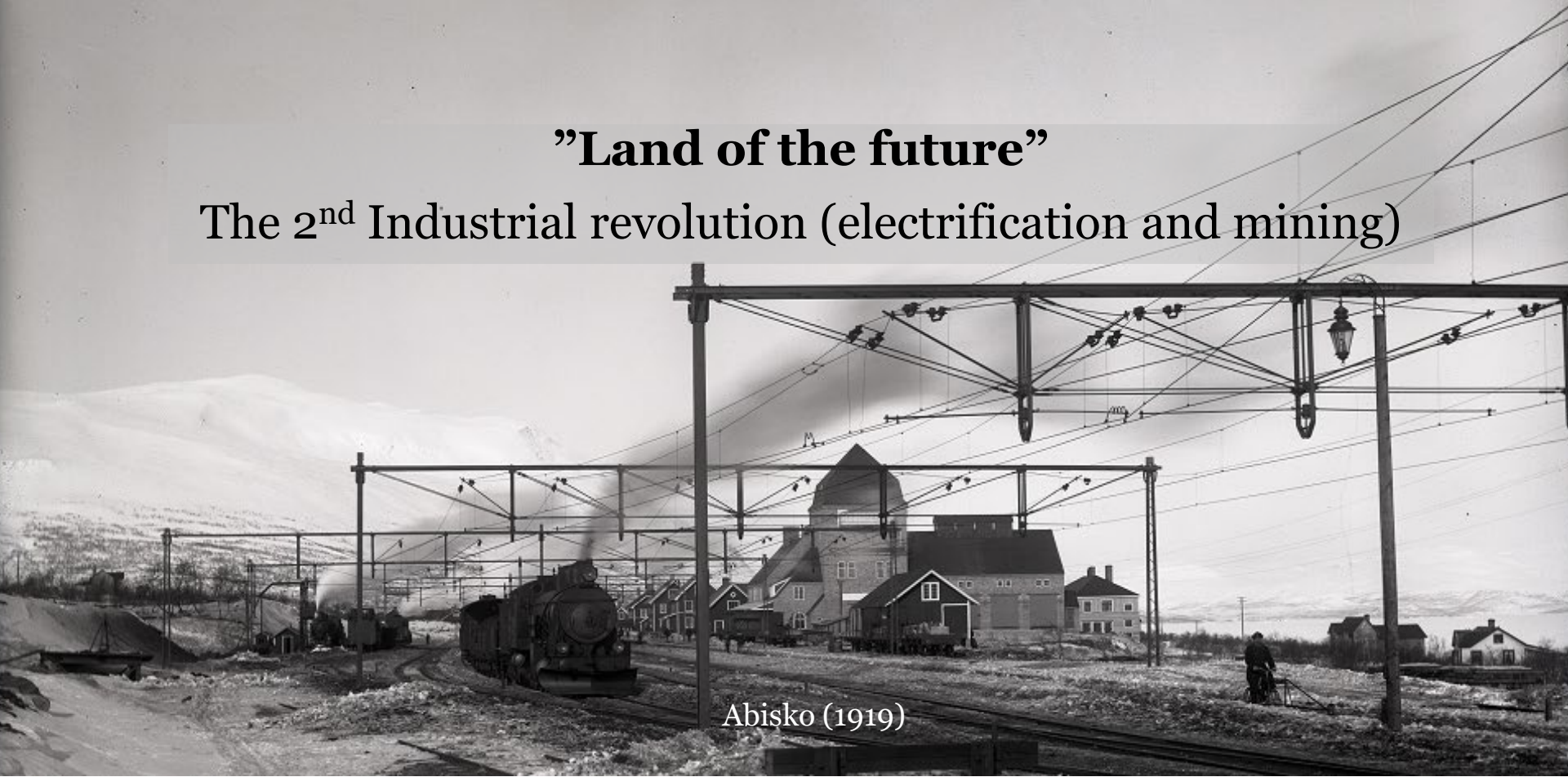
”The reason why we started the company is we’re really trying to solve a big problem and that is the global problem of global warming, and the increasing amount of carbons in the atmosphere.”

Peter Carlsson, founder
and CEO of Northvolt

Source: Interview in the ABB Decoded Pod November 14, 2022.

"Land of the future"

The 2nd Industrial revolution (electrification and mining)



Abisko (1919)

LEAB

LEAB's core technology is based on the use of a high-speed digital signal processing (DSP) chip. This technology enables the device to process data at a rate of 100 million samples per second.

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BOLLEN

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H2 GREEN STEEL

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HAARBYGDE

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REVOLT

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NORTHVOLT

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ORIS FERTILIZER

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PALEA

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KAUNIS IRON

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VATGAS PIPELINE

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HYBRIT

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FERTINORM

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ORIS FERT

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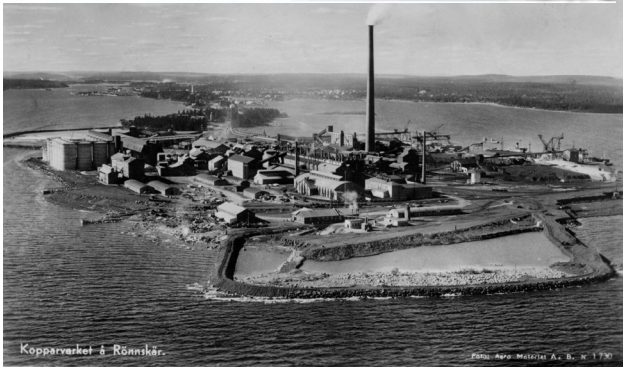
BOLIDEN

- SWEDISH NON-FERROUS MINING COMPANY

(ESTABLISHED 1924-)



Boliden mine
1930s and Aitik
mine 2000s



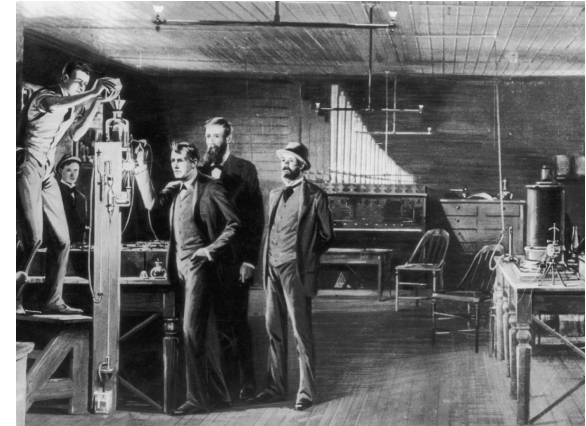
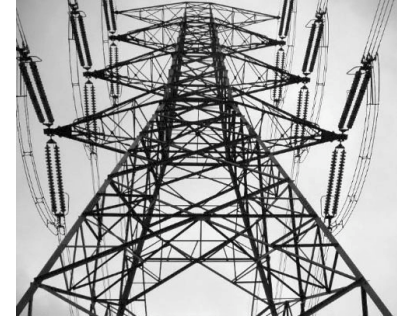
Rönnskärverken
1940s and 2000s



ECONOMIC DRIVERS

Second Industrial Revolution (ca 1880-)

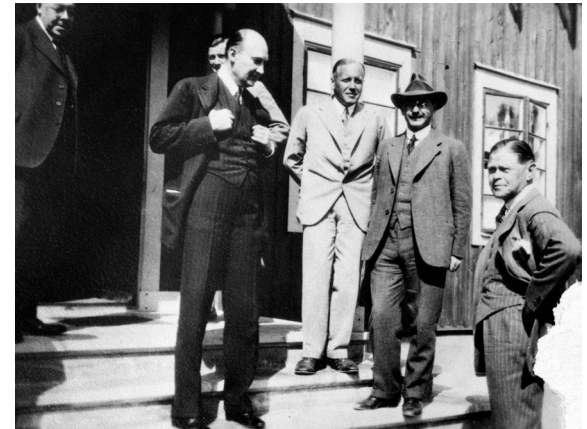
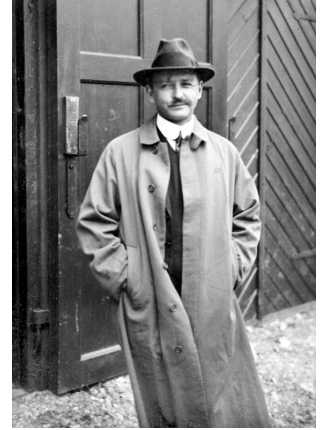
- Copper!
- Telegraph, electromagnet, internal combustion engine, electricity generation, electricity transmission, components in engines, radiators, batteries, etc.;
- Global demand skyrocketed from the late 1880s.



OSCAR FALKMAN – 1877-1961

- The Boliden ore deposit became internationally "notorious" in the 1920s.
- Strong interests in short-term exploitation;
- Falkman feared overexploitation for quick returns;
- "I [Falkman], "managed to resist these interests and Boliden can today [in 1941] serve as a springboard for further exploration work", as well as:

"creating the conditions for further industrial development" in the region.



Oscar Falkman and Ivar Kreuger 1929

BUSINESS LEADER PHILOSOPHY (FALKMAN)

- Good relations with the *local community* a prerequisite for building a successful and sustainable industry;
 - Good relations to other businesses;
 - Well being (*trivsel*) of the employees a key;
 - Build a “model” society
- An industry must give something back to the society in which it operates;
- Corporate profit not an end in itself: profit is only a means for creating something;
- Big concern: what happens to the local community [*Boliden*] when the mine has been depleted?

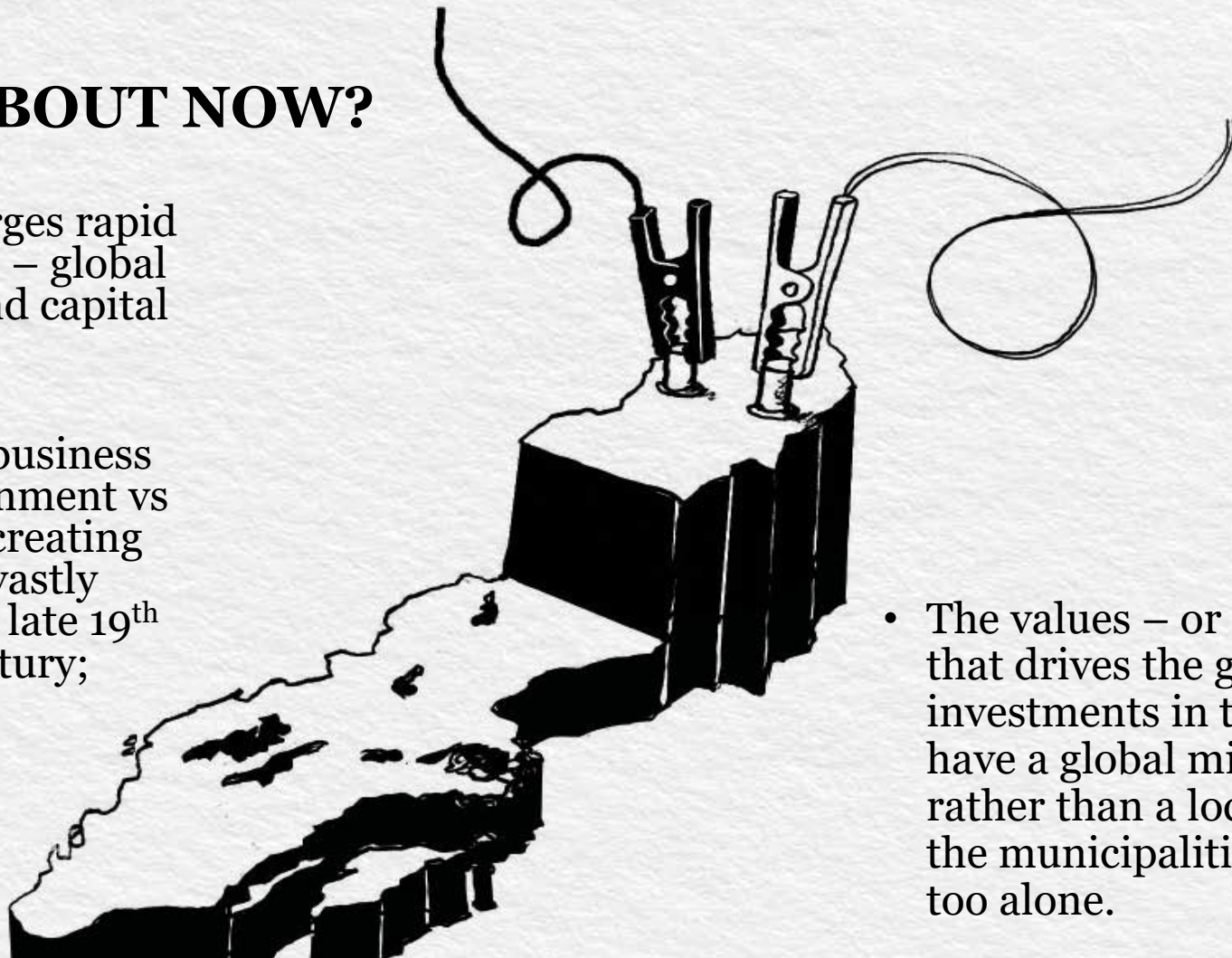
FALKMAN'S VIEW ON THE WHAT A LARGE INDUSTRIAL PROJECT BRING TO THE LOCAL COMMUNITY

- Creation of new jobs and new communities;
- Strongly increasing tax revenue;
- Improved infrastructure stimulates entrepreneurial "natives" to start "trucking and bus companies" etc;
- Schools, shops, Salvation Army premises, cinemas and the People's Houses;
- All this "paves the way" for "implanting" other entrepreneurship;
- *In the end: "isolation and boredom are broken".*



AND WHAT ABOUT NOW?

- Climate change urges rapid energy transitions – global business actors and capital drives the mega investments;
- Responsibility of business leaders and government vs municipalities in creating *local* “wellbeing” vastly different from the late 19th and early 20th century;



- The values – or that drives the g investments in t have a global mi rather than a loc the municipalities too alone.