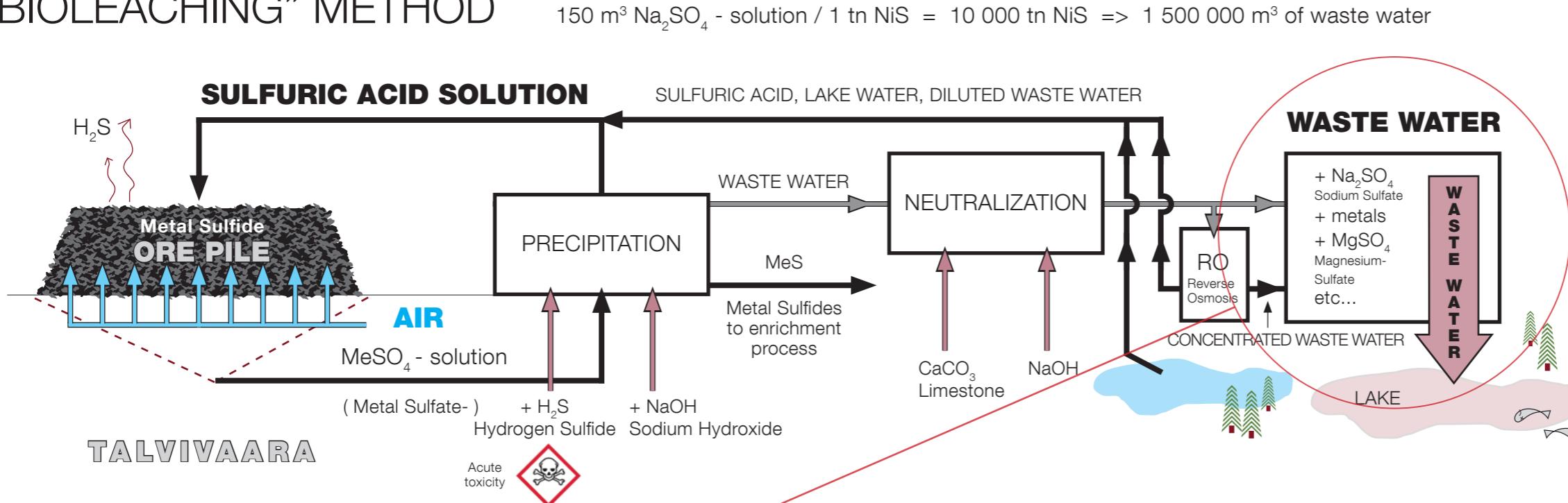


Comparison of Water Treatment of Mine

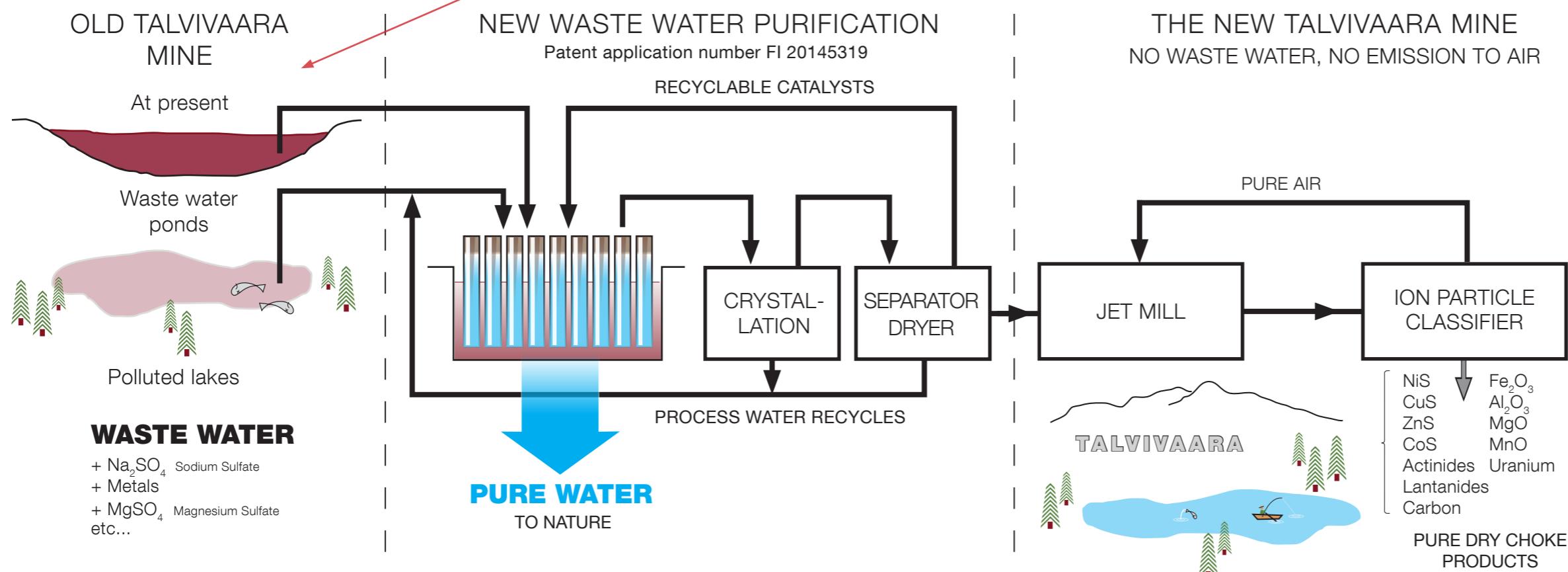
Hannu L. Suominen, Ph.D.
20.03.2015

“BIOLEACHING” METHOD



PURE WATER METHOD

Tri Hannu L. Suominen 26.2.2015



CAPEX AND OPEX

Investment approx.....2 Milliard €

Operating expenses include:

The use of many chemicals

The necessity to clean the process water/
Cleaning expenses

Only a few commodities for sale

Poor performance of the process

PRODUCTION EXPENCE

75 000 €/ton of Nickel

Stock Price of Nickel in 2015

14 500 €/ton of Nickel

LABOR FORCE

400 workers/10 000 ton of Nickel

INVESTMENT FOR THE OPERATION

Investment for the water purification..... 65 M€

Total 20 Mm³ of waste water

Period of purification 2 years

OPEX

1 – 2 €/m³ of waste water

LABOR FORCE

10 workers

ATTENTION

The water purification recovers commodities for sale