

Obtain deeper insights. Achieve higher purity.

AI-powered ore sorting with **OBTAIN™**



Explore the future of **AI** ore sorting

OBTAIN™ – A groundbreaking deep learning technology for TOMRA's sorters. It revolutionizes ore sorting by enabling precise detection and classification of individual particles, even when clustered.

tomra.com/mining



TOMRA

A giant improvement in sorting accuracy

OBTAIN™ brings innovative solutions to challenges that cannot be solved with conventional sorting methods. Our artificial neural networks are trained with thousands of images to create a new way that drives performance. Delivering a throughput independent performance, this innovation creates new revenue streams and maximizes product yield.

Why?

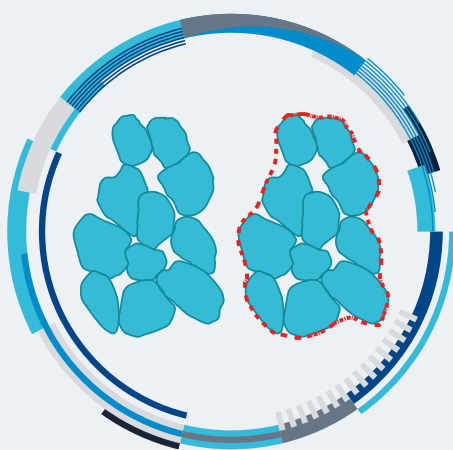
- Sorting performance depends on a good particle singulation
- Particle singulation on a conveyor belt depends on the mechanical in-feed setup, throughput, application
- The higher the throughput the more particles are touching each other

What?

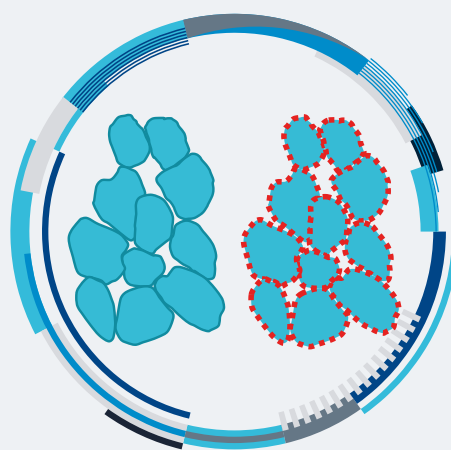
- Stable sorting performance independent of physical material singulation
- Improve sorting efficiency by increased detection precision
- Increase tonnages (belt occupancies) with same or better sorting results

How?

- Usage of Deep Learning approach - software using artificial neuronal networks (CNNs)
- Network is trained to see single rocks
- Classification done for each particle independently



Standard Segmentation



Segmentation with OBTAIN™

Benefits*

- Stable performance, independent of throughput
- Double capacity
- Increased sorting efficiency (higher yield and/or purity)
- Further reduction of Air Consumption
- Increase data precision

* Real numbers are dependent on application, test work necessary

