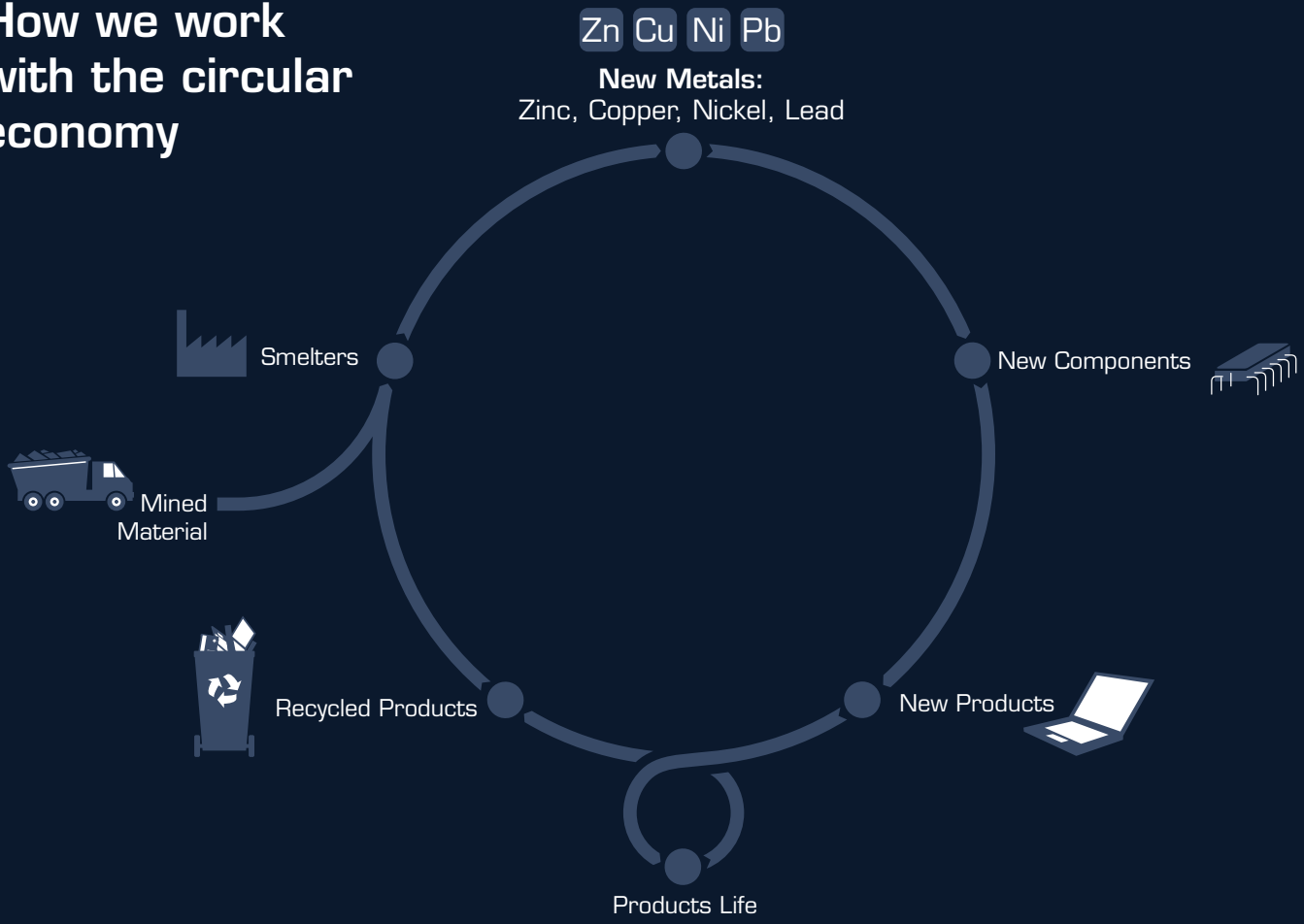
NEW BOLIDEN

Here at Boliden, we have been creating metals from recycled materials for many years. We extract new metals from our mines and recycle old metals such as zinc, copper, nickel and lead. These metals are, in turn, sold to different industries.

For example, the vehicle industry buys about 80% of all our lead production. The metals are transformed into new products such as car batteries, circuit boards and cables. When the products no longer work, the metals they contain end up back with us. And that's the circular economy. We re-use what already exists and in that way bring new life to broken-down electrical goods.

How we work with the circular economy



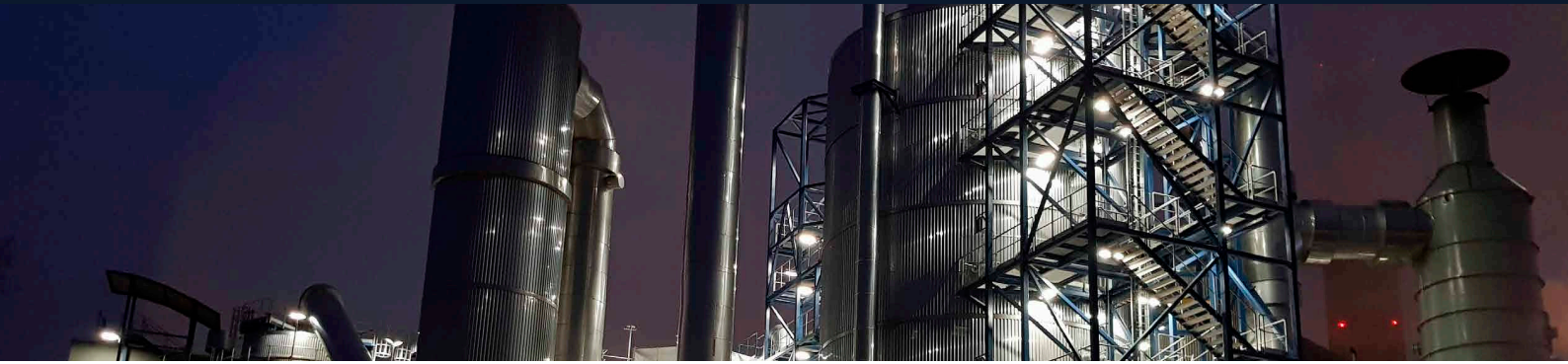
Bergsöe

We love lead. Why? Because it's a metal that is both unique, pliable and a great conductor of electricity. It's also completely recyclable. In fact, the lead battery in your car, and even in some electrical vehicles, could quite easily have been the same lead used in the battery of your grandfather's car many years ago.

At our Bergsöe plant in Landskrona, Sweden, we recycle four million car batteries every year. That's 50,000 tonnes of recycled lead. We've been doing this since 1942.

The recycling percentage is high – more than 97% of the material becomes a new metal.

Bergsöe sends its dust and residues to Rönnskär where new lead is created. And Rönnskär sends all its residual material that includes lead and antimony to Bergsöe. On top of that, the excess heat created from our production plant at Bergsöe is used to heat 2000 homes in the nearby Landskrona area.



Harjavalta

What do copper, nickel, gold, silver and sulphuric acid have in common? They're all primary products at the Harjavalta smelter. Harjavalta is one of the the world's most effective copper and nickel smelters and the only nickel smelter in Western Europe.

Harjavalta uses concentrates as well as recycled metals as its raw material. On top of that, it has the world's lowest sulphur dioxide emissions for every ton of nickel produced. The smelter at Harjavalta has been working closely with the Kokkola plant since 1969. The partnership has meant that all the copper, nickel and silver is circulated between these plants to optimise the recycling of metals and by-products. For example, any dust or residues containing zinc are sent from Harjavalta to Kokkola for zinc recycling.

In 2017, we created some 677,000 tonnes of sulphuric acid, 133,000 tonnes of copper, 25 tonnes of nickel, 66,380 kilos of silver and 4,667 kilos of gold. Our smelter is highly productive to meet today's needs.

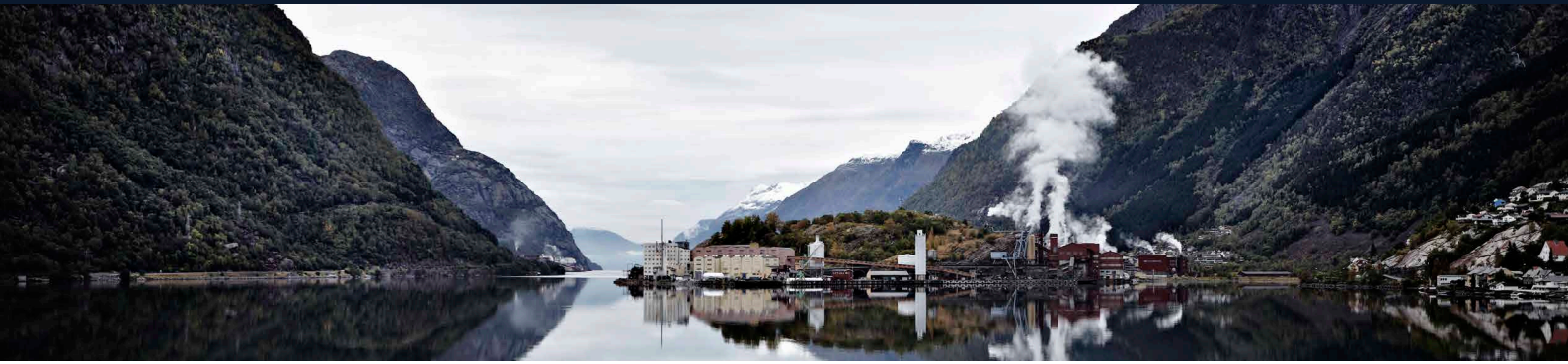
Kokkola

Did you know that Europe's second largest zinc producer is in Finland? The west-coast town of Kokkola to be exact. Zinc concentrates are sent here from around the world.

During the production process, zinc is extracted to meet the most demanding customer needs. There are about 40 different zinc products in our portfolio including both pure zinc and tailor-made products for specific customers and customer segments.

Kokkola also extracts zinc from several residual and secondary materials including waelz oxide, dust from ventilation and waste acids from places such as Harjavalta's copper production plant. Harjavalta, in return, receives products that include copper from Kokkola. About 15,000 to 20,000 tonnes of zinc are produced annually from secondary materials.

As one of Europe's largest zinc producers, there is a lot of excess heat from production. The heat and steam from zinc production, as well as the sulphuric acid plant makes steam for the zinc plant, Kokkola industrial park as well as district heating for the surrounding community. In turn, it meets the energy needs of about 22,000 homes!



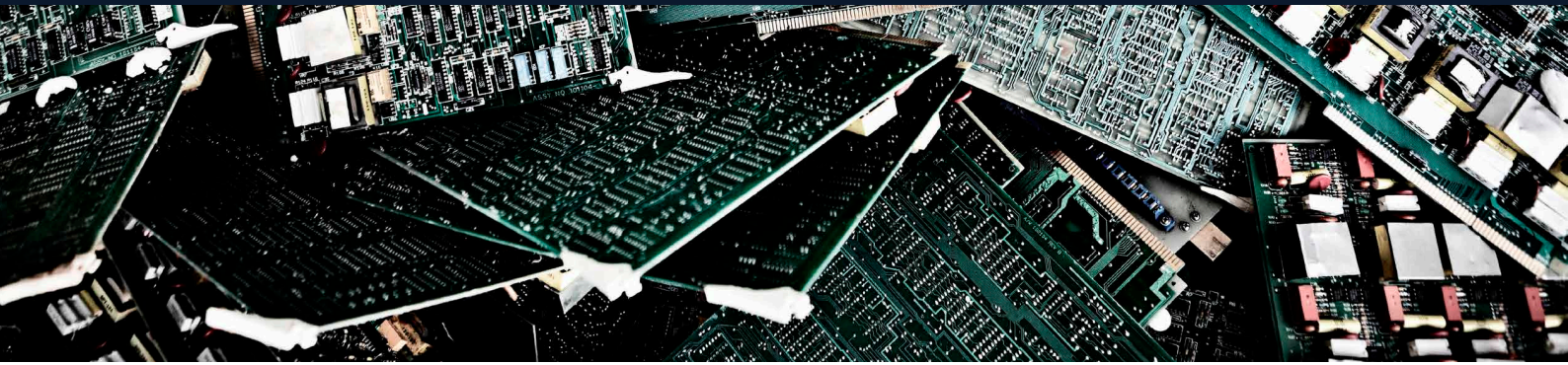
Odda

The zinc smelter at Odda in Norway has been active for over a century. Odda is located on the picturesque Hardanger fjord on Norway's west coast and is one of our oldest smelters. The primary raw material here is zinc concentrate used for zinc production. The secondary raw material is recycled zinc.

Somewhere between 35,000 and 40,000 tonnes of zinc from secondary materials are produced here every year. That's about 20 percent of Odda's total zinc production. All the remaining by-products that include copper are then sent to Rönnskär and Harjavalta for copper recycling there.

Did you know that zinc is an important metal for sustainable social development? Here's the thing. The process of galvanisation, adding a thin layer of protective zinc coating to steel, can extend the lifetime of that steel construction by up to 100 years. Galvanisation prevents rust. This means that we can reduce the CO_2 emissions due to the reduced need to consume iron ore. It also means that investments in infrastructure can last longer.

Of the 13 million tonnes of zinc that are used around the world, more than 60% are used for galvanisation. The building and infrastructure industries are the biggest users of zinc although the vehicle and electronics industries are also big end users. Regardless of how zinc is used, it can be continuously reused to a high degree.



Rönnskär

We love broken electrical devices. Why? Because we can give them a new life. The Rönnskär smelter, on the outskirts of the northern Swedish town of Skellefteå, melts metals that once upon a time were your mobile phone, HDMI cable or TV. We re-use their raw materials again for new products.

Thanks to investments and development in Kaldo technology, our Rönnskär plant is one of the world's leaders in the recycling of electronics. It's also one of the most effective copper smelters in the world. Some 200,000 tonnes of copper, 400 tonnes of silver and 13 tonnes of gold are produced here every year.

Apart from e-scrap recycling, the Rönnskär plant also takes care of the residual materials from steel mills, brass foundries and power and heating plants. What gets diposed becomes new raw material at Rönnskär.

In this way, we can make sure that every piece of metal gets a new life. The nice thing about metal is that, unlike plastic or paper, it can be recycled infinitely without losing any of its characteristics or qualities.

NEW BOLIDEN

Metals for modern life