Casting perfect steel is about the timing

Outokumpu, a world leader in stainless steel, competes with their ability to create the most streamlined process to cast steel. Nortal took them one step further.
Nortal solutions that made it happen!

- Smart Manufacturing
- Manufacturing Execution
- Supply Networks
- Advanced Planning & Scheduling
- Big Data Analytics
- Asset Performance Management
Outokumpu's site in Tornio, Finland is the most integrated stainless steel mill in the world: the same production site includes a melt shop, a hot rolling mill, a cold rolling mill and even a ferrochrome smelter as the source of one of the essential raw materials of steel, chromium.

Outokumpu had a modern manufacturing execution system at its disposal, but developing production needs required even better timing in the steel casting process.

They wanted the smelting operators to see any slack in the process instantly. That way the system would not be in charge of the process but the person making the decisions.

The Challenge
Nortal created a scheduling system for steel casting called ValuA with a predictive model of the different smelting phases. The system was designed to serve line control operators by creating a one-glance view of the complicated steel production line process.

The system was implemented in phases, first just for the systems specialists, then for the people doing the production work. People were quick to understand the new way of viewing the multistep steel casting process.
The system allowed users to see a real-time view of the overall smelting and hot rolling process 24/7, the present situation, historical progress and a prediction of how the next phase of the process will go. It was easier to pinpoint maintenance needs and errors.

Optimizing the casting process boosted production, decreased lead times and extra buffer phases weren't needed anymore. All in all, planning ahead was simpler and the company was made more resilient, like their product.

The Result
The impact

+116 TONNES PER YEAR

More steel per year with the same manufacturing capacity.

129 cars worth of steel was added to annual production. The only change was the upgraded system.

7.3% SHORTER PROCESS

A faster process

The smelting process was shortened by 7.3%, a huge efficiency increase in steel smelting.

38 MINUTES These 7.3% meant reducing every smelting process by 38 minutes.

24/7 OVERVIEW

A visualized process

Outokumpu now has a 24/7 real-time overall view of the smelting and hot rolling processes.