

Automation for coal wagon cleaning

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robocoast.eu

The Mission



- Robocoast Digital Innovation Hub is launching an Automation related Innovation Challenge competition.
- Adolf Lahti Yxpila Ltd, part of KWH Logistics Group, is a modern, professional operator in the machinery business, offering all-encompassing and customer-focused logistics and machinery services
- Adolf Lahti Yxpila Ltd aims to carry out **RDI projects** in collaboration with successful participants in order to solve the challenge presented.
- The solution will be implemented at Tahkoluoto harbor at Port of Pori. The challenge is open to everyone.

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The challenge competition has been organized as part of the "Robocoast R&D Center – Robotics Living Lab for companies" project funded by the European Regional Development Fund and the Regional Council of Satakunta.

THE CHALLENGE

- 48 coal wagons per train, six trains daily. Almost 300 wagons daily.
- The aim of the challenge is to create an innovative automated solution to remove the leftover coal from the wagon immediately after the cargo has been unloaded. Currently the cargo is unloaded with a special purpose vehicle and then wagons are cleaned manually.
- The ongoing expansion at Tahkoluoto harbor will introduce new wagon “toaster” to melt the frozen cargo in winter, and tipplers where cargo is poured out on a conveyor system by tilting the wagon upside down.
- The innovation need to be able to clean all those 300 wagons every day either when one is upside down, or right after it exits the wagon tippler.
- Time for cleaning is limited on icy conditions because wagons will cool down very quickly. The innovation need to be able to remove the leftover coal whether they're frozen or not.

WHERE ARE WE NOW

1. Specification / project start (13.11.2019)
2. Opening the challenge competition at robocoast.eu, video included (15.1.2020)
3. On-site visits (3.2.2020)
4. Evaluation of the propositions (week 12 onward)
5. Winner Enmac Ltd (14.5.2020)
6. Adolf Lahti Yxpila Lts and Enmac Ltd made a preliminary study agreement

“WE ARE IN A HAPPY POSITION TO HAVE ROBOCOAST DIH AT OUR SERVICE”

SAMI VENERANTA, COO, ADOLF LAHTI LTD.