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# Digital Solutions
## Unlock new potential in your blast process

## Know more, act faster

Optimising the performance of your shot blast machine is not easy.

Advances in automation and clever machine design have helped, but to fully take control of your blast process, you need to know more about what's going on inside your machine.

You need data that tells you when something is not right or running below optimum. Ideally in real time.

**Tracking this kind of data on a scale that enables serious improvements is only possible and economical by using digital technology.**

It opens up the possibility to

- get real-time data from the machine and turn it into meaningful insights;
- detect early warning signs of faults or performance degradation;
- take corrective action.

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# The Monitizer® platform

Monitizer® is our Industry 4.0 platform. Developed and evolved with the Norican Digital team, it offers a flexible and scalable foundation for your digital journey.

From quick wins to ambitious digital transformation programmes, Monitizer® digitally enables your equipment and delivers the tools and systems you need to collect the right data and start optimising and improving your process.

The Monitizer® suite is made up of modular building blocks, which can be **retrofitted on existing machines.** The system acquires data from any machine or sensor – not just Wheelabrator equipment.


### With Monitizer® you can:

- digitally enable your existing equipment and digitalise your blast process;
- view the right data in real time via customizable dashboards;
- get alerts, respond and trouble-shoot;
- centrally collect, store and analyse live and historical data across machines, processes and sites;
- use advanced digital tools designed specifically for your process.

### Your most pressing problems, tackled digitally

Most owners or operators of shot blast equipment can instantly list the main issues and cost drivers of running their machine. At Wheelabrator, we develop digital tools that focus on these most pressing issues and make a difference fast.

Our tools are developed on the Monitizer® platform, which means once you adopted one, it's easy to deploy new ones as they become available.

The first trio of digital applications addresses the three biggest challenges blast machine operators grapple with:

- blast media consumption,
- energy consumption,
- maintenance.

More tools are coming soon.

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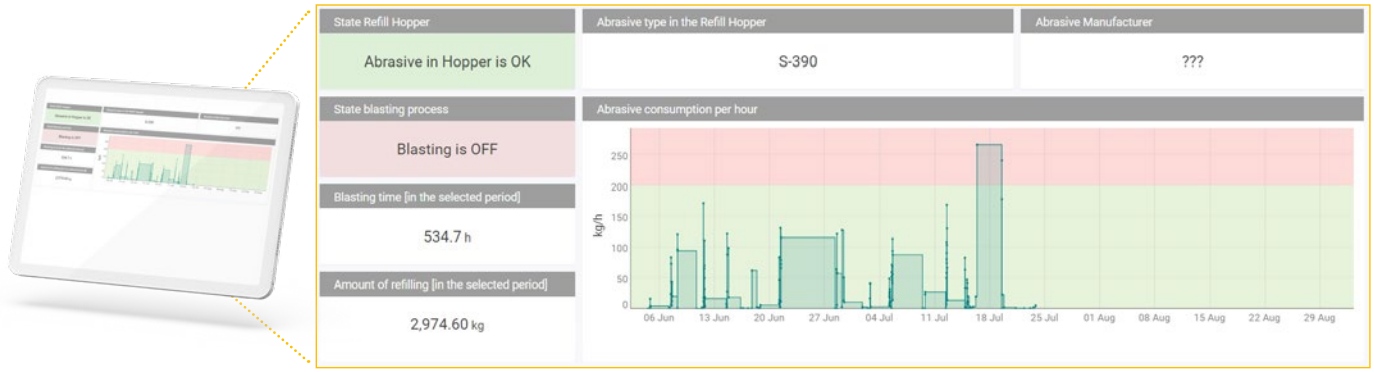
# Digital Solutions
## Reducing abrasive consumption



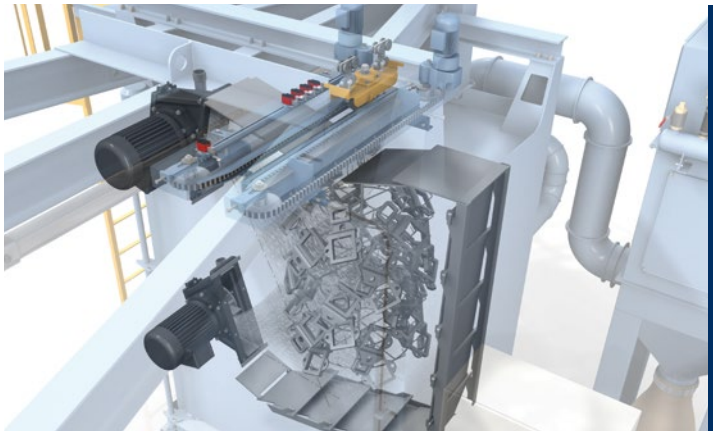

## Lowers not only abrasive costs

Blast media costs make up a large part of the total running cost of a shot blast machine. And the volume of abrasive that flows through the equipment, relative to the blast result achieved, is a key determinant of wear inside the machine.

Our digital tool for controlling abrasive consumption gives an accurate picture of blast media use over time and relates it to other metrics.

This means root causes of high consumption can be identified quickly. Even complex or subtle causes of increased abrasive throughput can be unpicked and remedied.

Reducing or optimising abrasive consumption not only saves money on abrasive, it also reduced energy use and wear.



### In numbers

On a hanger-type machine with four 11 kW blast wheels, the tool helped reduce abrasive consumption (and cost) by 17% and cycle time by 20%.
Less wear means less maintenance and reduced spend on wear parts – by about 10%, according to our estimates. In total, the annual savings for this machine and application amounted to about €10,000.



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# Digital Solutions
## Optimising energy consumption


## Saves money, sustainably

Shot blast machines consume a lot of energy due to the power required to accelerate the abrasive. Bringing that energy consumption down while maintaining a stable blast process can unlock savings and contribute to more sustainable production.

Our tool for reducing energy use tracks the right parameters to strategically optimise standby and idle times, turbine rpms and more.

This means operators and managers can instantly see if their machines are using an unusual amount of energy. They can quickly find the cause and adapt the process. Over time, the machine can be optimised for ever better energy efficiency without compromising quality or throughput (in fact, both may be improved as a side effect of energy saving efforts).

## In numbers

Just by reducing idle time by one hour per day, the tool was able to unlock annual energy cost savings of €14,000 on a roller conveyor blast machine with eight 45kW blast wheels, running in three shifts 240 days a year.



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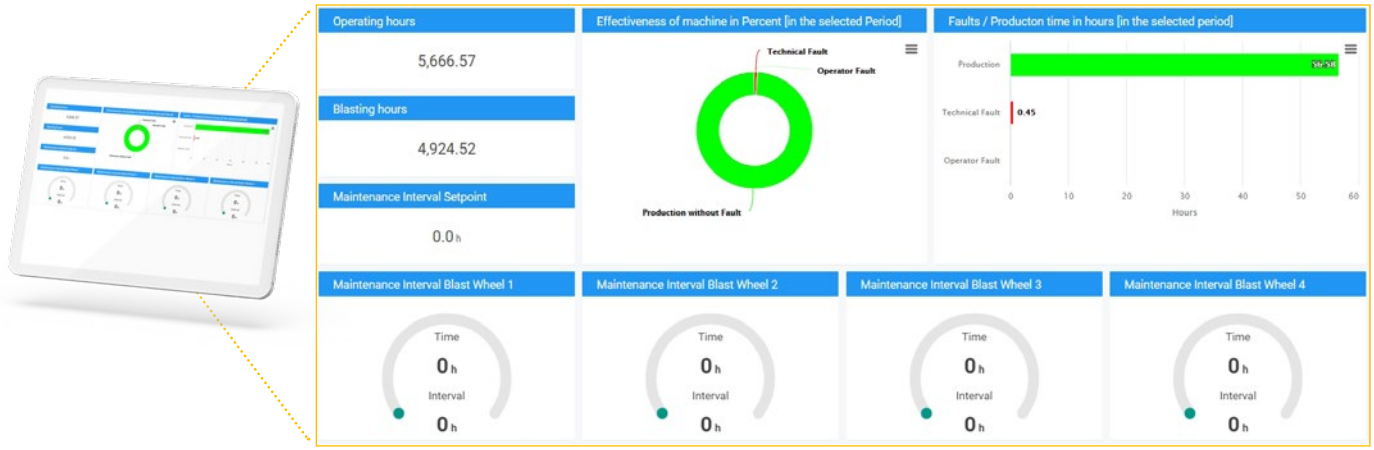
# Digital Solutions
## Preventive maintenance




## Avoids surprises

The inside of shot blast machines is a violent place. Wear comes with the territory. As with all equipment, keeping unplanned downtime to a minimum saves money and resources, as well as ensuring production targets are met.

Our tool for preventive maintenance presents a real-time picture of machine condition and offers an early warning system for wear and drops in performance – by tracking key parameters such as turbine vibration, pressure differentials in filters and other performance metrics.

This enables maintenance at exactly the right time, not too soon, not too late, preventing unplanned downtime without overspending on spare parts.


## In numbers

Pre-empting blade breakage through early detection and planned exchange cost €1,500 at one reference customer, whereas letting the blade break incurs costs of at least €4,500, depending on the extent of the damage. Blocked filters at one customer resulted in extra costs of €7,500 for clean-up and increased wear.



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# Digital Solutions
## In the pipeline


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# Digitally Upgraded
## Technical details and requirements

**Our digital technology was designed to make a difference to your production now, not when you get a new machine. That's why digitally enabling existing machines is so important to us.**

Our NoriGate data gateway can be fitted on almost any machine, unlocking new headroom for improvement. Our Monitizer® platform can connect existing data streams and integrate with other digital systems in your production environment.

Depending on what you want to achieve, our teams of experts can assess which additional sensors and devices you need to start collecting meaningful insights on your process.

The digital upgrade may well be the most cost-effective upgrade you've ever made to your machine. It gives your performance a boost while making your process more transparent.

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## The technical details at a glance

- One NoriGate gateway and one Monitizer® license are required per machine/PLC
- NoriGate connects a machine (one PLC) and up to 1,000 sensors to the Norican
- NoriGate can read data from:
    - Siemens S7 1200 + 1500 (configuration with PLC assistant on NoricanHub)
    - Siemens S7 300 + 700 + LAN adapter (configuration via PLC project file)
    - IO via modbus (TCP + RTU)
    - Digital IO (8 connections)
    - OPC UA
    - Database (MQTT adapter required)
- Dimensions: approx. H 123 x W 57 x D 114mm (incl. DIN rail adapter)
- Weight: approx. 1,000g
- No software installation required; Monitizer® is accessible via browser (Chrome, FireFox, Safari)
- Data is stored in the NoricanHub and is initially available for analysis for 12 months*
- Pre-configured tools/dashboards
- Simple user administration for defining access rights
- Highest security standard officially tested in cooperation with TÜV


**Requirements for the use of our digital tools:**

- 24V power supply
- Machine PLC and/or sensors
- Internet connection

* Longer storage periods possible on request.

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