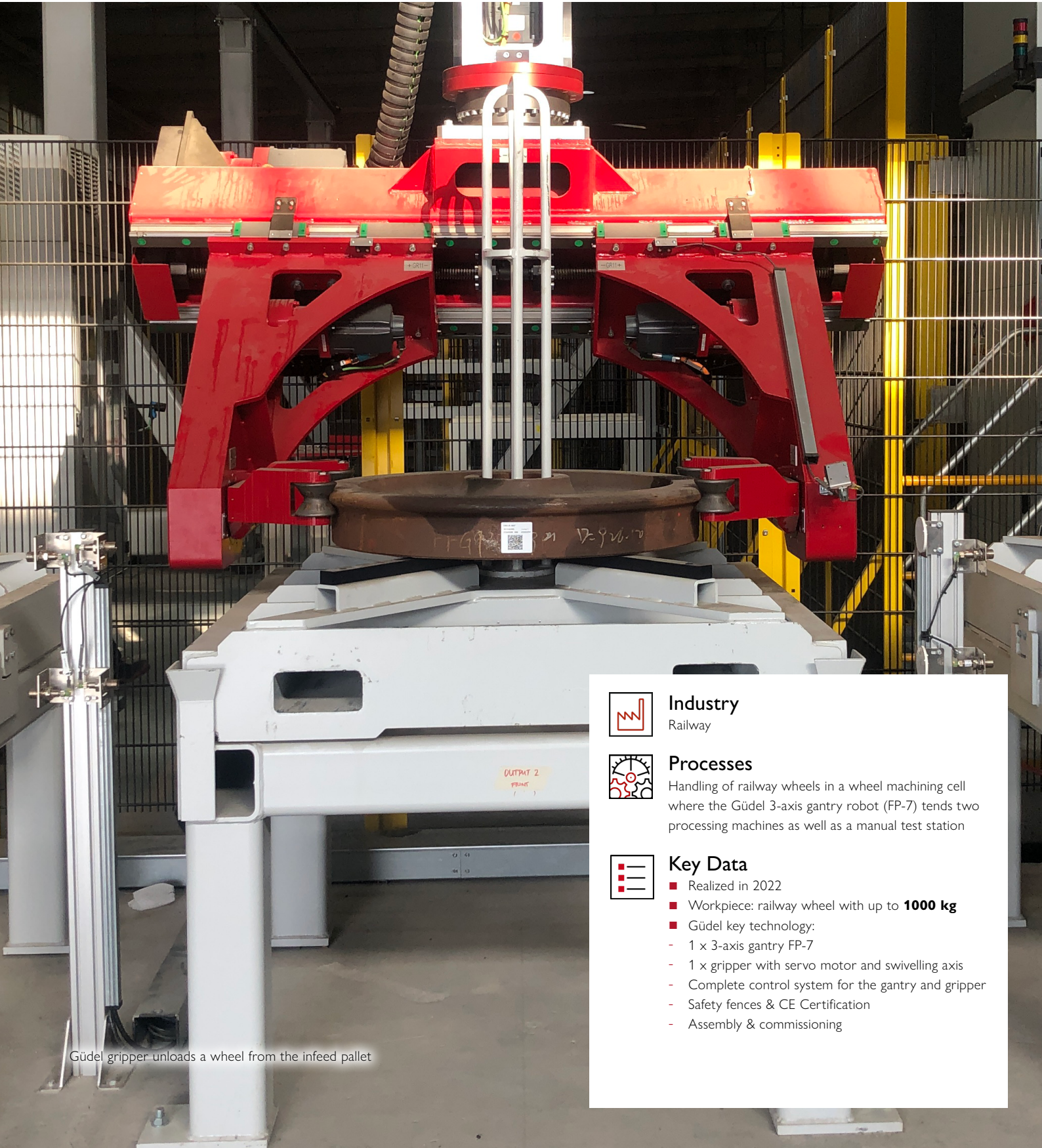


## Automated Wheel Production

Machine interlinking in an FFG railway wheel cell with a gantry robot



### Industry

Railway



### Processes

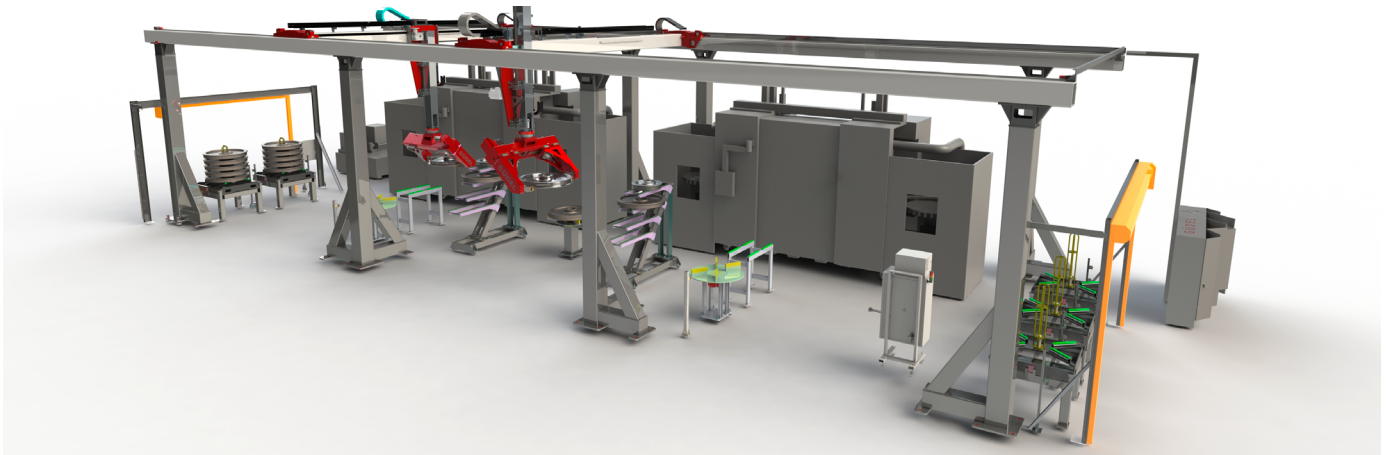
Handling of railway wheels in a wheel machining cell where the Güdel 3-axis gantry robot (FP-7) tends two processing machines as well as a manual test station



### Key Data

- Realized in 2022
- Workpiece: railway wheel with up to **1000 kg**
- Güdel key technology:
  - 1 x 3-axis gantry FP-7
  - 1 x gripper with servo motor and swivelling axis
  - Complete control system for the gantry and gripper
  - Safety fences & CE Certification
  - Assembly & commissioning

Güdel gripper unloads a wheel from the infeed pallet



**FP-7 interlinks the whole railway wheel machining cell**



## Process Description

### Depositing & unloading

The rough railway wheels are stacked and placed on the infeed pallets by the forklifts provided by the customer. The Güdel area gantry FP-7 then unloads the wheel with its gripper with swivelling function and places it on a reading station. After the wheel is scanned, the FP-7 takes it from the reading station and place it into the vertical FFG turning machine.

### 180° swivelling

Each rough wheel has to be machined on both sides. When the first side is finished, the FP-7 enters the machine, unloads the wheel, swivels it 180° and loads the wheel again for machining of the other side. After that, the FP-7 unloads the finished wheel and holds it in front of the barcode printer for

labelling. There is also the possibility to manually inspect the finished wheel at the SPC station at the operator's request. Afterwards, the finished wheels are stacked on the pallets at the out-feed conveyor, transported outside the cell and then picked up by a forklift.

### 2 wheel types can be machined parallelly

With its control technology, Güdel has designed this wheel cell in the way that two different wheel types can be produced simultaneously - one wheel type per turning machine - in batches. With the servo-motorized gripper, the correct diameter can be checked, thus ensuring that the correct wheel type is loaded into the machine. The entire cell is enclosed with safety fences and high-speed roll-up doors to ensure production safety.

## Güdel Technology

- Automation of production and testing lines of railway wheels, axles and wheelsets
- 2-axis & 3-axis gantries, grippers, floor conveyors
- Factory automation
- Machine- & process interlinking
- Worldwide production, assembly and customer services



## Güdel Germany GmbH

We, Güdel Germany, a subsidiary of Güdel Group AG with headquarter in Langenthal, Switzerland, stand for the competence center of railway in the group. We support our customers along the complete journey from sales over design, assembly, commissioning to after-sales. With high speed, high precision, heavy payload, maximal availability and reliability all in one, Güdel is your global partner for your individual automation solutions.

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