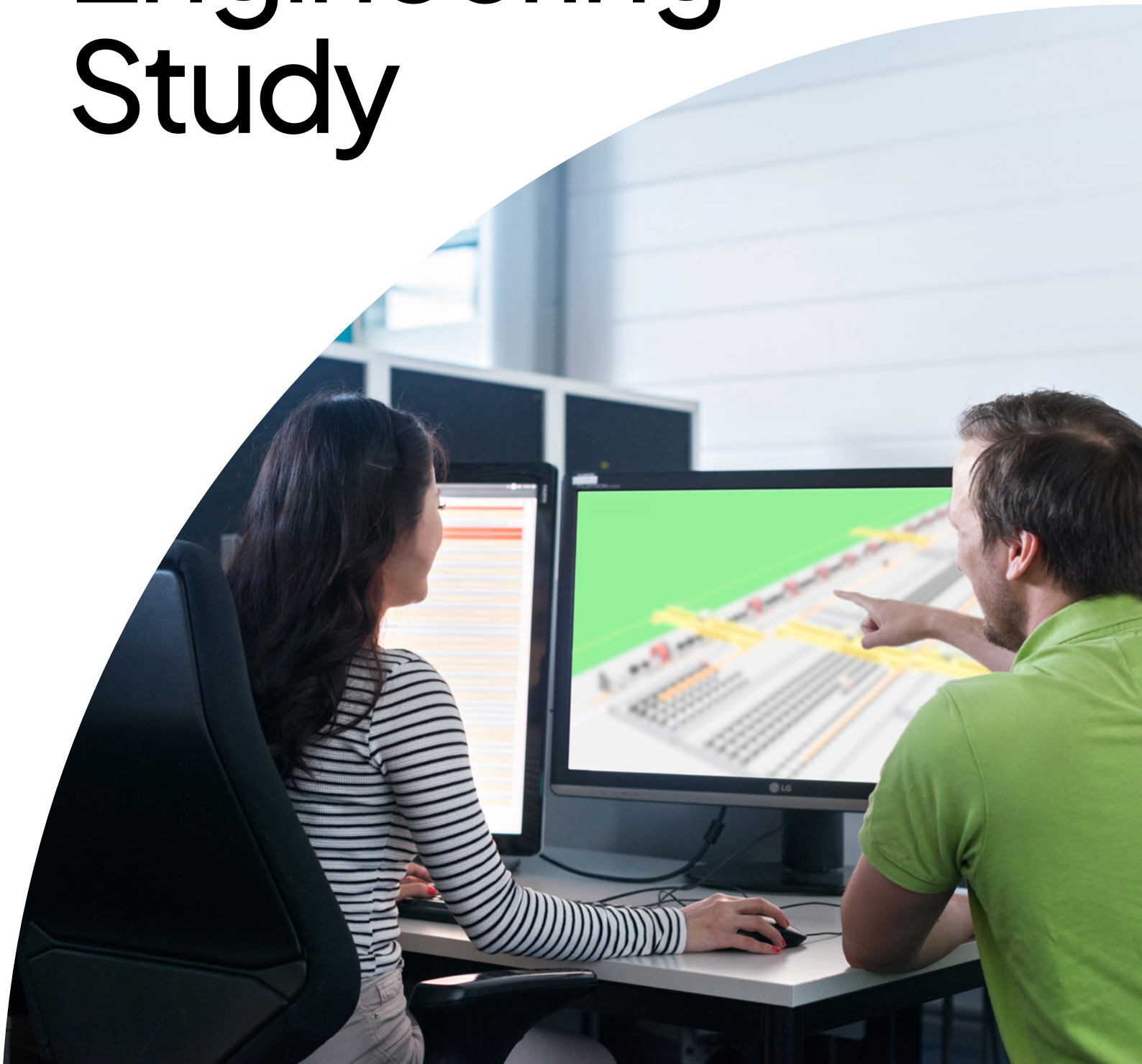
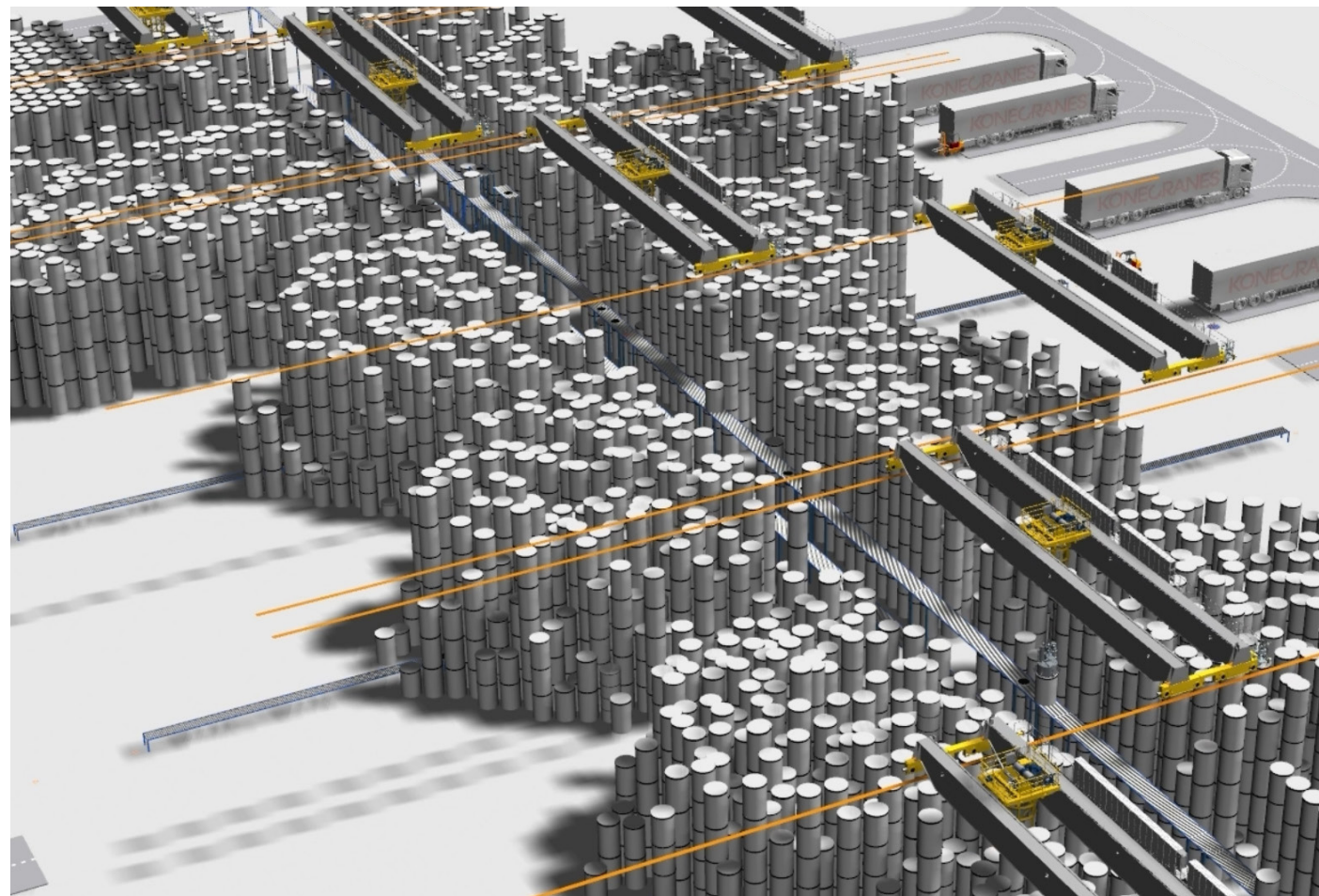


Material Flow Engineering Study





Comprehensive analysis and design

The Konecranes Material Flow Engineering Study is designed to provide a comprehensive analysis, design and optimization strategy for the movement of materials within a production system.

Our engineers use highly accurate and dynamic simulation models to assess and verify capacity and performance. From this analysis, we provide recommendations on system design and capacity, the number of overhead cranes and performance requirements, as well as insight in the operational rules of such a system.

The engineering study can be applied in a wide range of applications as well as intralogistics systems such as cranes, forklifts, high bay storage systems, conveyors, trucks and trains.

Benefits

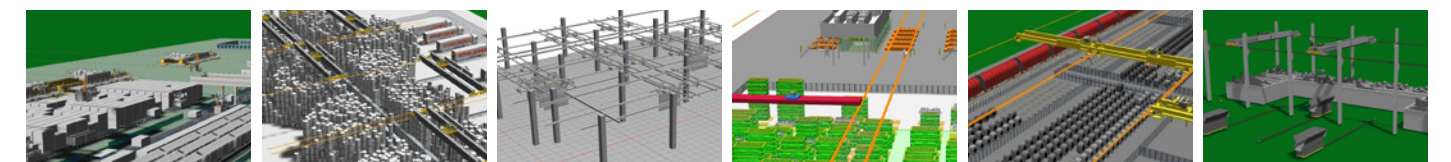
- Provides a validated concept, verifying the feasibility and effectiveness of a proposed solution.
- Provides optimized layout recommendations for facility design to achieve the best material flow.
- Assists in defining needs and making strategic choices, especially in early project phases when requirements may be unclear.
- Offers a foundational design framework for projects.

Simulation-driven insights for smarter material flow decisions

We use simulation models to provide a clear, data-backed picture of how materials move through a facility and where improvements can be made to boost safety, efficiency and throughput. Depending on project needs, we offer different levels of simulation. The right level is determined by factors like whether a project is greenfield or brownfield, how much process detail is already defined, and how much confidence is needed before moving forward.

Process visualization	System simulation
01 Simulation models including system components show how materials would move through a facility and how the system would behave, built on reasonable, common-sense assumptions about movement and timing. CORE DELIVERABLE Animated visualization of the process.	02 This simulation incorporates defined process times, equipment behavior, and process inputs like how often materials arrive at the system. With this detail built in, different scenarios can be run to see how the system performs. CORE DELIVERABLE Concrete statistics and KPIs relevant to the business—like throughput, utilization, and wait times.
Benchmarked simulation	Virtual commissioning or emulation
03 Simulation results are validated against an existing system to verify accuracy. If a direct comparison isn't available, detailed modeling of selected process steps will be used for validation with customer approval. CORE DELIVERABLE Customer-approved KPIs with a high degree of confidence in result accuracy.	04 The simulation model is connected with your real or virtual control systems (such as a PLC or warehouse management system) to test the actual control logic, interfaces, and system behavior—essentially a dress rehearsal for your control software. CORE DELIVERABLE Verified control logic and a lower risk of surprises during commissioning.

Experience in a range of industries and applications



Pulp

Paper

Aviation

Automotive

Steel

Scrap



Konecranes is a global leader in material handling solutions, serving a broad range of customers across multiple industries. We consistently set the industry benchmark, from everyday improvements to the breakthroughs at moments that matter most, because we know we can always find a safer, more productive and sustainable way. That's why, with around 16,500 professionals in over 50 countries, Konecranes is trusted every day to lift, handle and move what the world needs. In 2025 Group sales totaled EUR 4.2 billion. Konecranes shares are listed on Nasdaq Helsinki (symbol: KCR).

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