

# Logistics Simulations

Enhance your  
operational efficiency





LOGISTICS  
ANALYSER

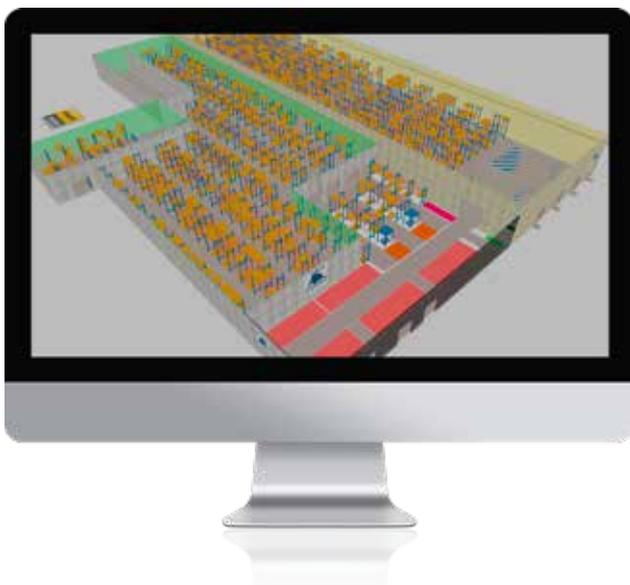
# What is a simulation?

*“A simulation is computational reproduction of an operation, process or system which can be used to reveal what will happen within that operation over an extended time, often measured in years.”*

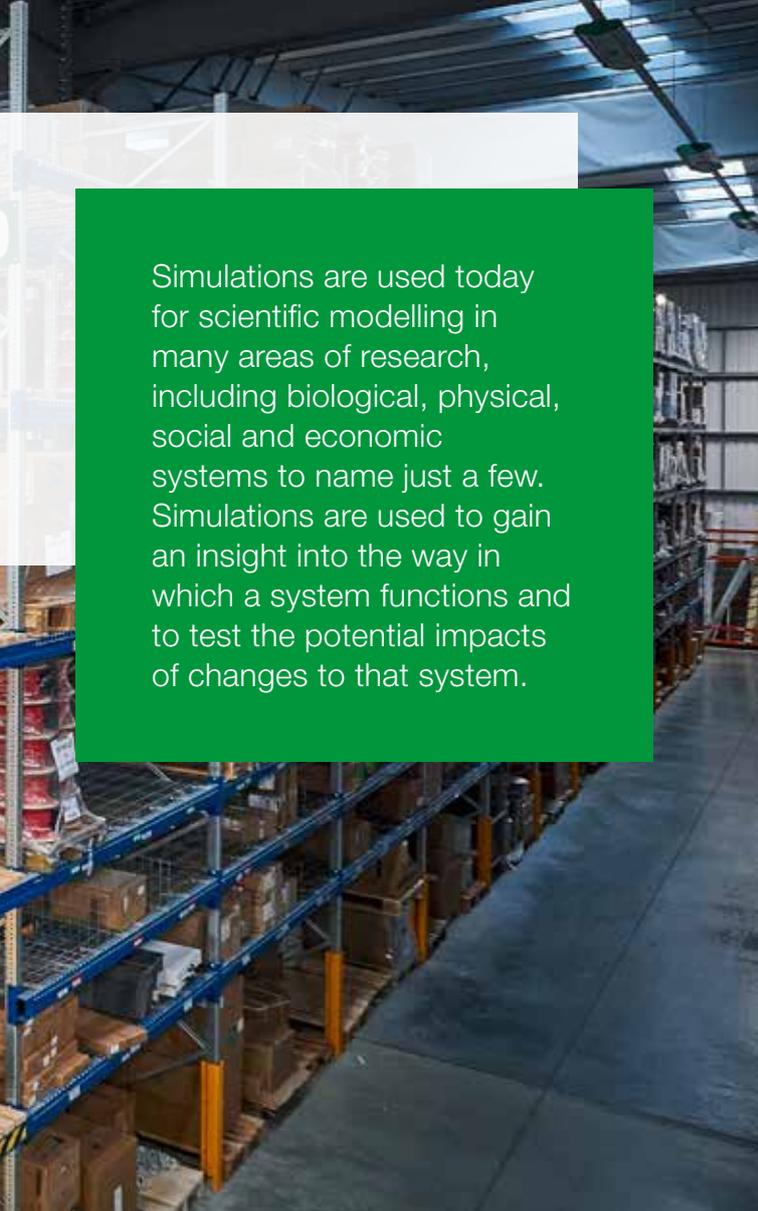


## How do simulations fit in with logistics and materials handling?

Building a solid and efficient materials handling operation doesn't start with buying a truck – instead, the process should always begin with a careful analysis of your needs and current operation so that you can see what is being done well and what can be improved.



- Simulating a system replaces guesswork with detailed data-driven reports.
- Simulations can take into account all factors that will impact the Total Cost of Operation (TCO) and let you calculate the true ROI of any changes.
- You can analyse the full impact of changes before you make them. Will you unintentionally create new traffic hotspots, bottlenecks and queuing situations? How will this impact on safety and efficiency?
- Compare different racking layouts for capacity, traffic efficiency and throughput.
- Compare different materials handling equipment types and placing strategies and see the results based on different metrics such as man-hours, pallets per hour, etc.
- Predict, evaluate and optimise materials handling equipment fleets. Do you have the right number and type of trucks? Can resources be more efficiently distributed between departments or shifts?
- Avoid the pitfalls of “static calculations”. There is more to an operation than travel distance, lift and drive speeds.
- Build efficient logistics systems based on facts, not guesswork.



Simulations are used today for scientific modelling in many areas of research, including biological, physical, social and economic systems to name just a few. Simulations are used to gain an insight into the way in which a system functions and to test the potential impacts of changes to that system.

## History of Simulation in UniCarriers

- Today** — Logistics Analyser is a core component of the UniCarriers 360° offering, adding value to customers through delivery of complete logistics solutions.
- 2000s** — More advanced features, reporting tools and improved 3D visuals added.
- 1990s** — Software redeveloped for Windows OS and renamed “Atlet Logistics Analyser”.
- 1980s** — Development continues on the software now named “Computest”. Simulations provided for major projects with clients such as Volvo.
- 1979** — Portable computer/modem named “Osborn” built so information could be transmitted by telephone line from customer sites to a server for analysis. This was done from as far away as Australia.
- 1975** — First computer assembled at the Atlet factory in Sweden. DOS-based simulation software written using the idea: “Put your warehouse into our computer”.

## Logistics Analyser

Our Logistics Analyser software is an essential tool. It allows us to draw detailed warehouse layouts before we input individual customer data on product profiles, throughput, picking behaviour, shift patterns, etc. Add in any ancillary equipment such as conveyors or wrapping machines and then define all of the material flows that exist in that operation.

However, this won't be enough: you also need experience and knowledge. Fortunately, Logistics Analyser has a vast built-in database of information collected over decades of experience. This database covers factors like order picking, preparation times, even the time needed for a driver to get on and off different truck types. It also includes a complete database of truck capabilities such as drive speeds, acceleration, lifting/lowering speeds, etc. Using this data correctly lets you move away from static theoretical calculations and work instead with dynamic practical models that generate accurate real world results.

When you put all of this together you create an accurate computational model of a warehouse or logistics operation that you can use in simulations to investigate every question you have and analyse each solution proposed.

Logistics Analyser – the complete tool for simulating, analysing and optimising any materials handling operation.

## Want to learn more about logistics and materials handling?

Check out the newly updated edition of the Materials Handling Guide. UniCarriers' own academic level text book has something for everyone in the industry.



It's all about  
the price.  
**But what  
price?**

## **Reduce your Total Cost of Operation with UniCarriers**

We agree. Price is everything. Or to be more specific: your Total Cost of Operation (TCO). That's why we're so focused on cutting costs and improving your material handling. The truck and its performance play an important role, but this is even more about how we can support you in optimising your warehouse operations to give you the best value for your money. Which – in the long run – is what creates a winner.