

icube
INTELLIGENT STORAGE SYSTEM

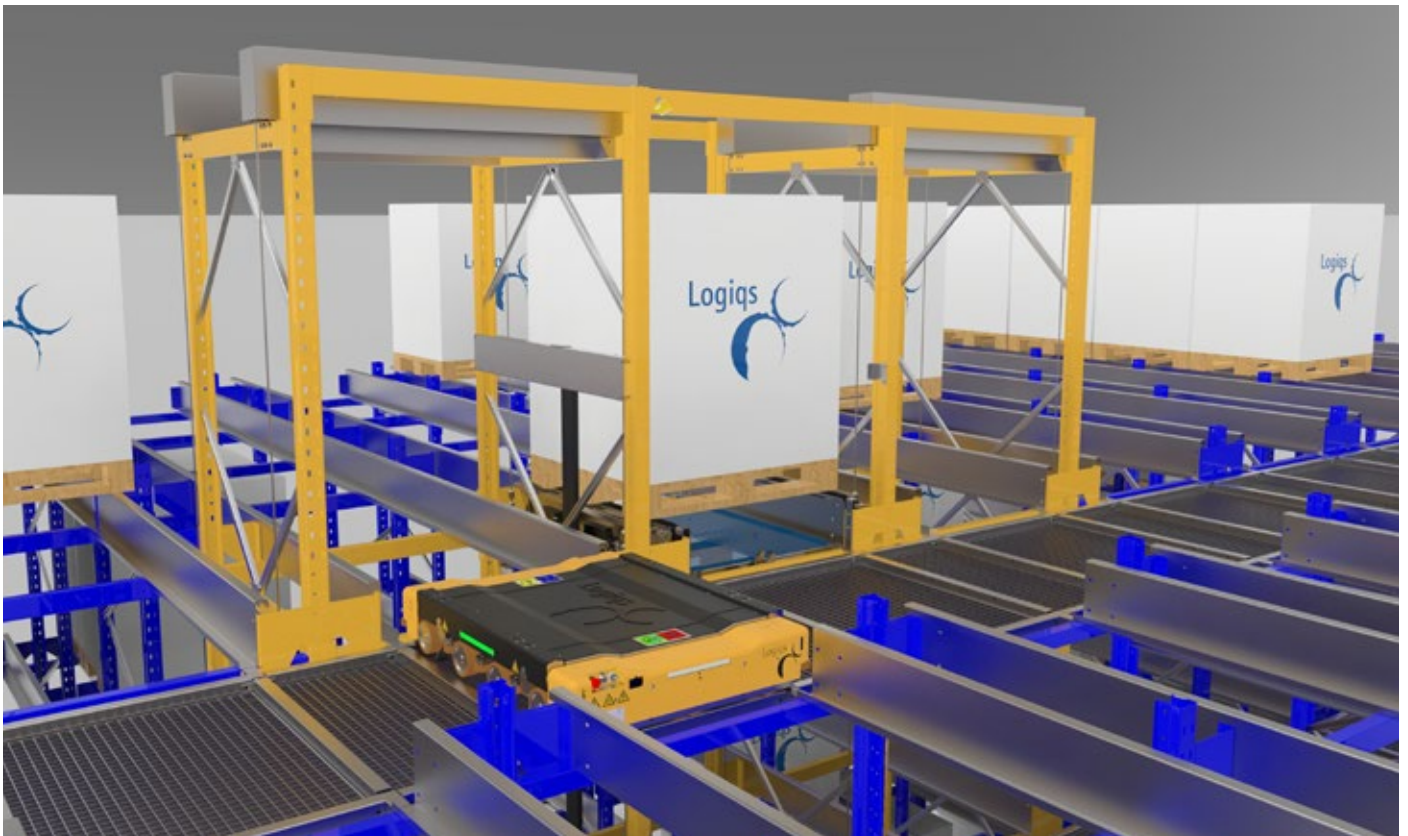
The most flexible and cost effective AS/RS



www.logiqs.nl

FLEXIBLE AND MODULAR WAREHOUSE AUTOMATION

Through better space usage, turnkey solution, modularity, scalability, redundancy and automation, the Logiqs iCUBE create the following benefits for our clients: What makes the iCUBE stand out from all other warehouse automation systems on the market is the fact that the iCUBE offers the advantage of full-scale automation, while using far less machines than any other system.



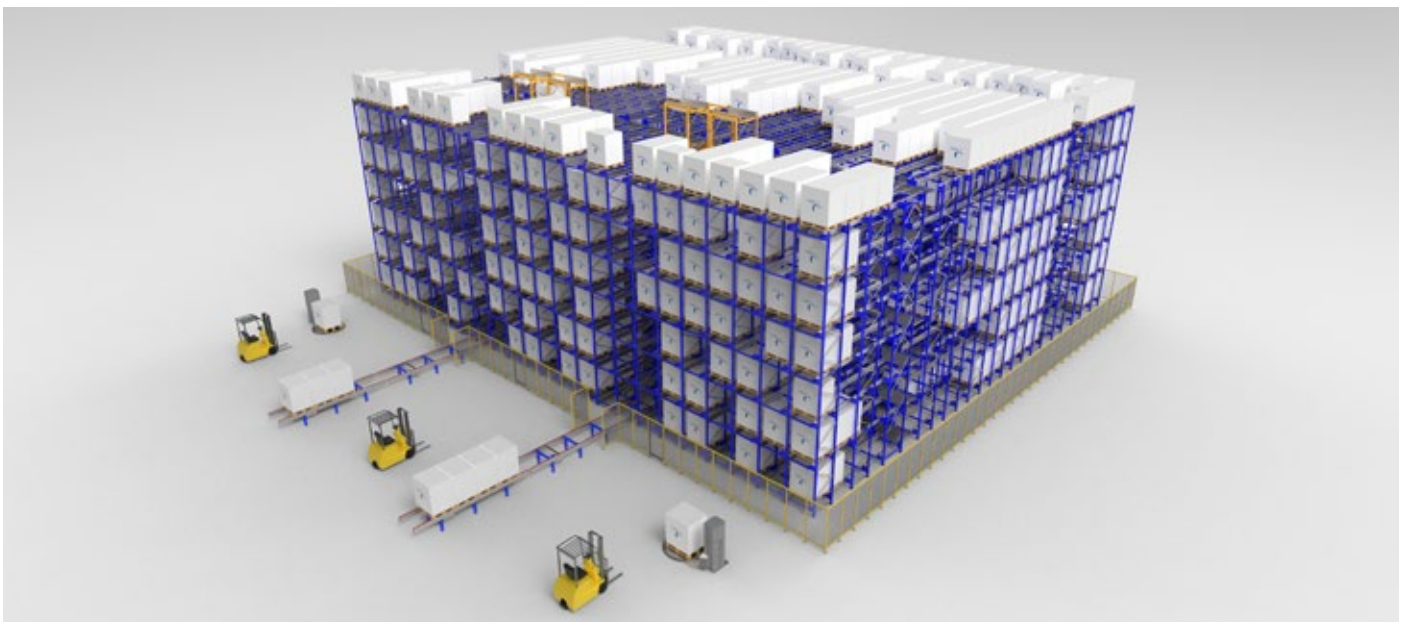
The iCUBE operates all the pallet movements using only the Logiqs 3D-Carriers and Vertical Transporters (VT).

All machine and pallet movements are being controlled automatically using our advanced Warehouse Control Software while the inventory management and space allocation is done by our Warehouse Management System.



Our complete software suite ensures the automated fulfilment of all the inbound, outbound and order picking jobs and does not require the operators to manually control the machines or give out individual orders for each pallet. And since the iCUBE only needs 3D-Carriers and Lifts to achieve full automation, it doesn't require expensive and unreliable chain mechanisms for each aisle, or other roller mechanisms.

This mix of hardware and software gives our customers extreme flexibility and redundancy for their warehousing operations. The iCUBE is one of the few warehouse automation systems that can be implemented in existing warehouses, new builds as well as in phased builds. Both the racking and the automation can be modified in phases allowing for both changes of capacity and throughput according to the customer's needs.

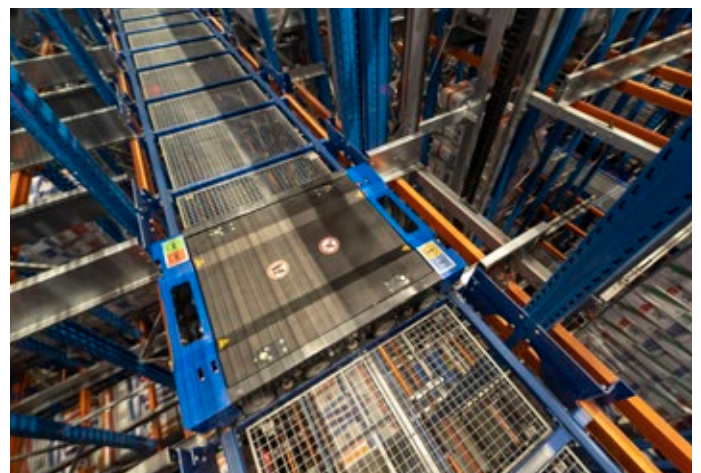


HIGH AVAILABILITY AND HIGH THROUGHPUT



For warehouses where high availability is paramount, the system can also be equipped with more X-tracks (side movement tracks between aisles for the 3D-carriers) so that the 3D-Carriers can reach individual pallets even faster.

This also results in shorter individual aisles and therefore in an even better availability for individual pallets or pallet batches.



Depending on system size and throughput requirements the iCUBE can be equipped with as little as one 3D-Carrier and one Lift. If the size and/or throughput requirements of the warehouse are higher, the system can be equipped with as many 3D-Carriers and Lifts as needed. And since all machine movements are automatically controlled by our software, several 3D-Carriers can work together to complete high priority tasks quickly.



The 3D-Carriers can also work together through hand-offs using the lift, so that one 3D-Carrier can fetch the pallets from the top level and place them in the lift, while a second 3D-Carrier waits at the bottom level to transfer the pallets to the loading/unloading area. The 3D-Carriers are powered by 100ah Li-ion battery pack. They can operate continuously for up to 6 hours, and they can fully charge up automatically in 45 minutes using our aisle charging locations. The 3D-Carriers can also be set to take advantage of opportunity charging and to charge their batteries whenever there is downtime.

HIGH AVAILABILITY AND HIGH THROUGHPUT



When an iCUBE uses more than one 3D-Carrier and one Lift, the system also becomes redundant, and the iCUBE can continue operating even in case one of the lifts or 3D-Carriers malfunctions or are undergoing maintenance.

One of the main advantages of an iCUBE automatic warehouse is the increased safety, both when compared to conventional forklift operated warehouses, but also to large automated crane systems that employ very heavy machinery.

Safety zones can be configured in the iCUBE, so that the 3D-Carriers can keep executing tasks in the rest of the warehouse, while a certain zone of the warehouse becomes no-limit to the 3D-Carriers.

By using an iCUBE system, forklifts are completely eliminated from the main storage area removing both the risk of operator injury and of possible damage to the racking that could occur as a result of a forklift accident.



MAXIMUM SPACE USAGE

The Logiqs 3D-Carriers and Lifts as well as the X-tracks (side movement tracks between aisles for the 3D-carriers) are extremely compact, and have a low impact on the overall storage capacity of the warehouse.

The Logiqs software also makes all picking strategies possible, allowing for full usage of the available storage lanes. Our software can also be configured to automatically reorganise lots in down time, so that pallets are already prepared for expedition without user input being needed.

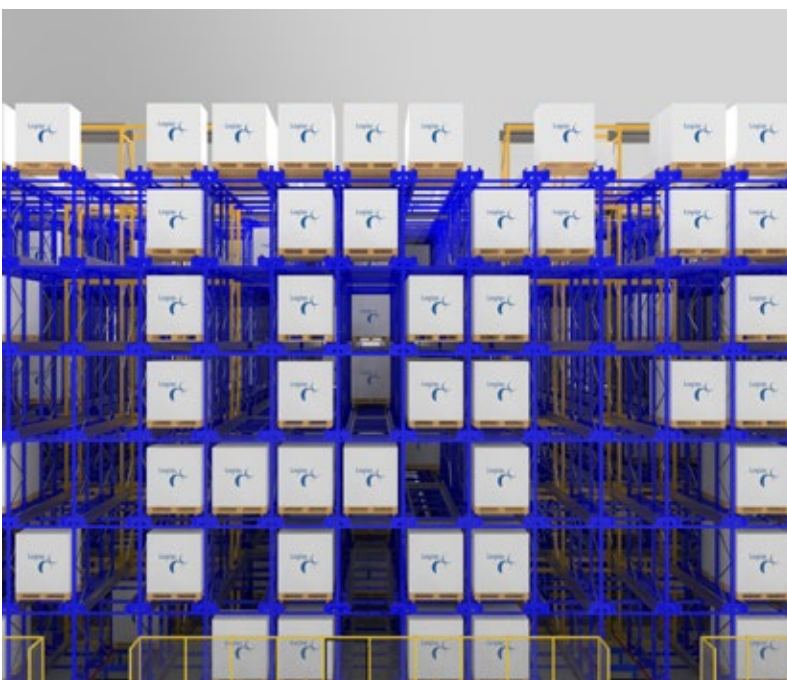
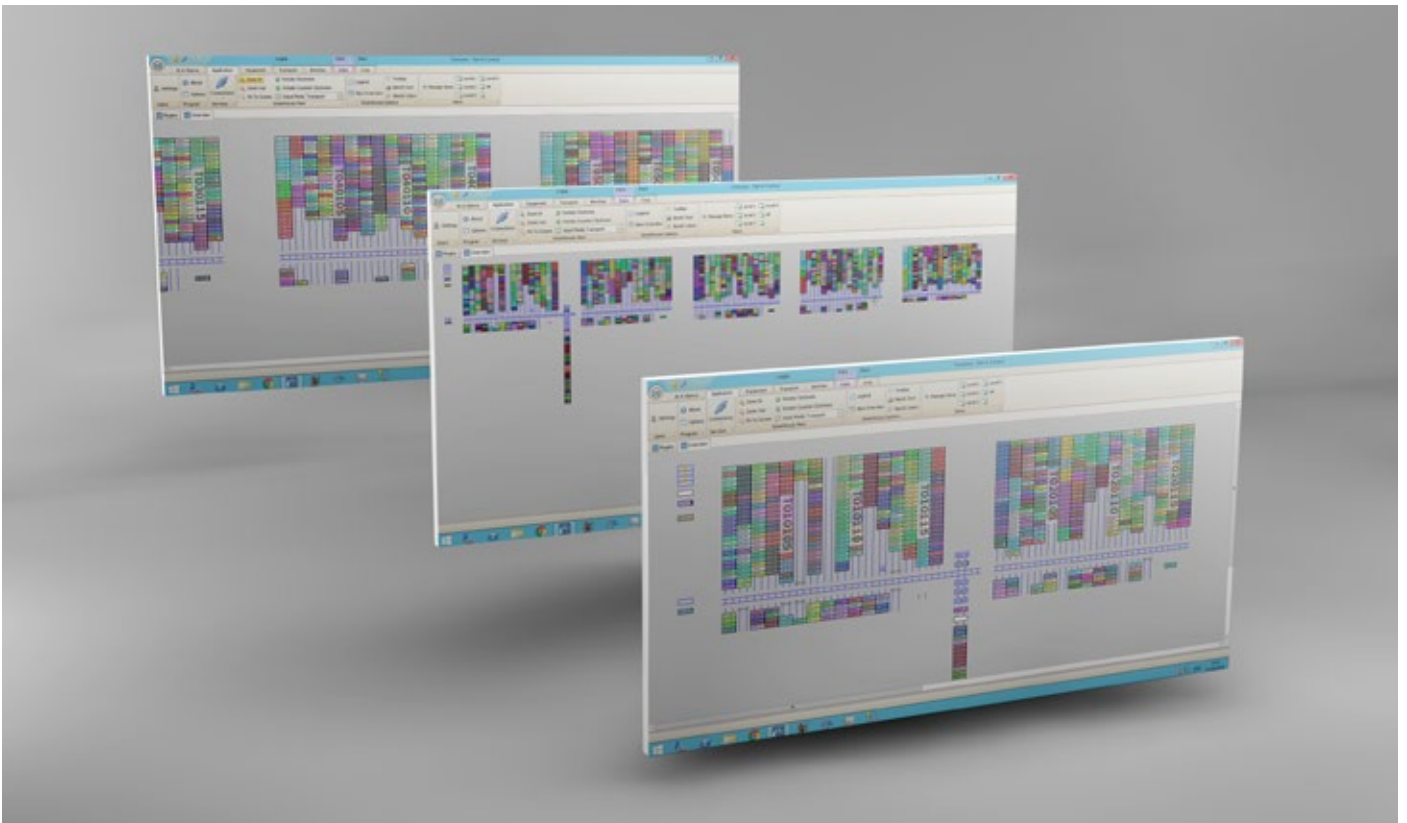
The loading and unloading area for an iCUBE system can also be designed to be much more compact than in a conventional warehouse. The system can be equipped with one or more Pallet Transfer Cars that move pallets to and from the dock to the storage area.

This solution dramatically improves space usage for the loading/unloading dock and guarantees a high throughput rate for the loading/unloading area.

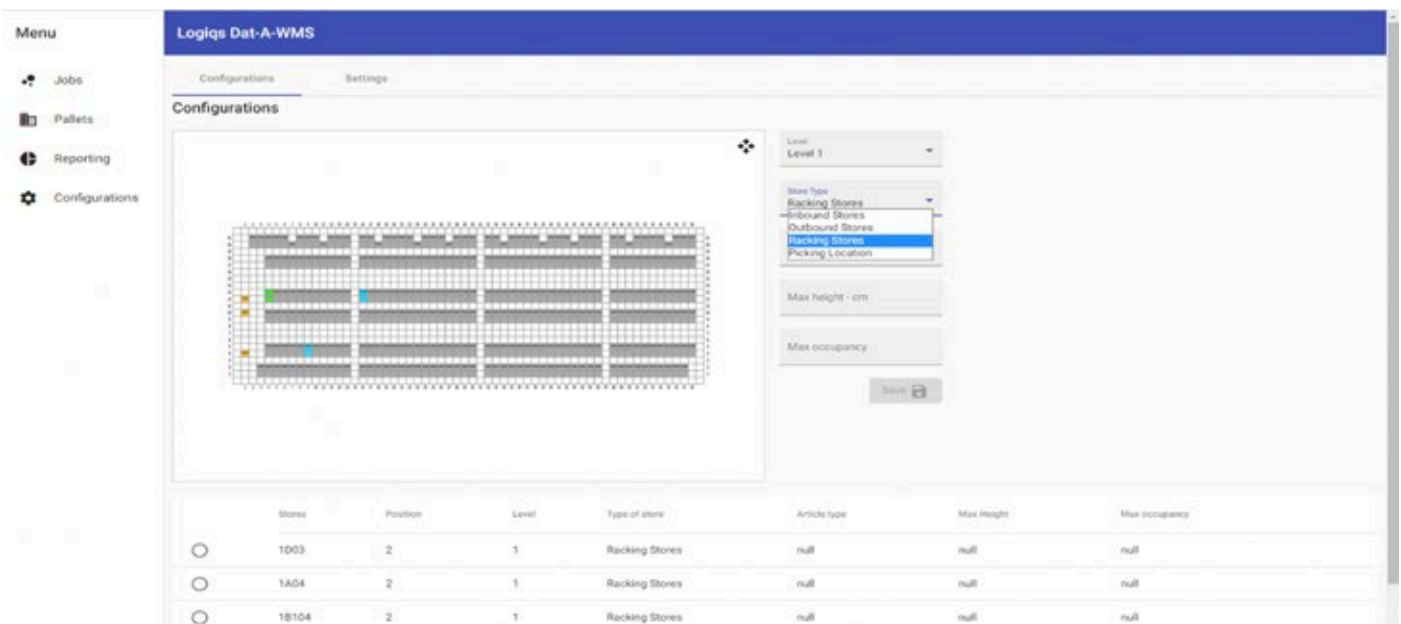


DAT-A-LOGIQS SOFTWARE

The iCUBE is managed and controlled using our proprietary Dat-A-Logiqs Software. This software package uses two main applications: Dat-A-Control and Dat-A-WMS. Dat-A-Control automatically handles the machine movements and controls, while Dat-A-WMS handles the space and inventory management in the warehouse.



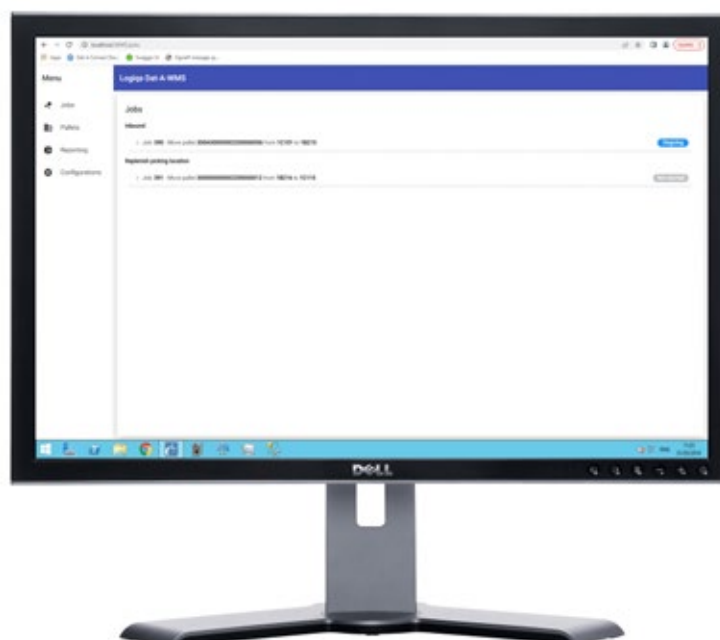
Dat-A-WMS allows the operators to configure the storage strategy for each individual location in the iCUBE as well as prioritize between inbound, outbound and order picking. Because of the codeless configurability, operators can customize the allocation logic of the system according to their business requirements.



Once the Dat-A-WMS has determined the allocation and/or fulfillment needs, Dat-A-Control then executes the tasks using advanced logistics algorithms that maximize the usage of the 3D-Carriers and Vertical Transporters.

The Dat-A-Logiqs Software suite gives full control and unmatched flexibility to the warehouse operators, allowing them to fully automate operations and achieve the process flow they need for their operation.

The Dat-A-Logiqs software communicates with external software through modern API's permitting fast implementations with other ERP and WMS systems.



VT & 3D-CARRIER



Because of this extensive standardisation and modular approach to the design, the latest generation of the iCube is completely ready for use and turnkey, for the best price on the market and is by far the most flexible automated solution available today. The iCube is extremely suited for phased builds and unforeseen extensions.



By using only 3D-Carrier's, that can move throughout the entire iCube and VT's (Vertical Transporters) movement between levels we managed to keep the logistical design of the iCube brilliantly simple. Since the 3D-Carrier and the VT's use only their own sensors, there's no need for other sensors in the iCube.

The VT's can be equipped with chain drive, and can therefore be attached to a conveyor. The VT's can transport either just the 3D-Carrier, just the pallet or both. So that during peaks more 3D-Carriers can be deployed to one level of the iCube.



The iCube is an automatic pallet storage system designed from the ground up using standardised components. The iCube is fully automated using our 3D-Carriers and Vertical Transporters. Using an iCube system means getting the most out of the available storage space, without needing space for operating a forklift between rows.



Lift capacity:	up to 1.600 Kg	Charge time:	45 minutes
Operating speed:	1,0 m/s	Opportunity charging:	Yes
Operating temperatures:	-25° to +40° C	Wheels:	Vulkollan
Battery capacity:	48V 100 Ah	Frame assembly:	aluminum
Battery working temperatures:	-25° to +40° C	Maintenance interval:	6 Months



3D-Carrier

Vertical Transporter

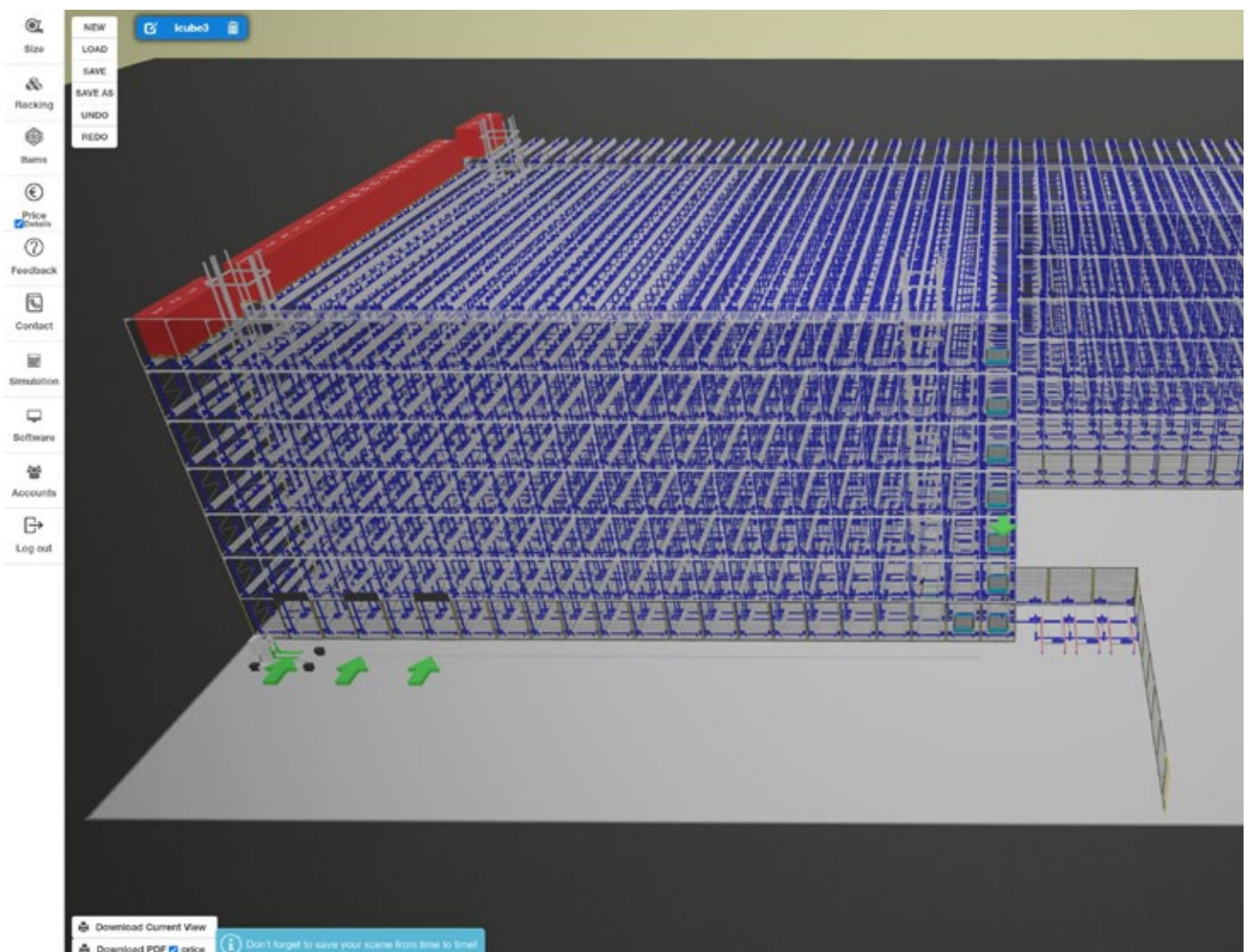


Lift capacity:	up to 2.000 Kg	Security sensors:	Photocell
Operating speed:	0,4 m/s	Simultaneous 3D-Carrier and pallet transport:	Yes
Operating temperatures:	-25° to +40° C	Frame assembly:	galvanized steel
Actuator capacity:	12 kW	Maintenance interval:	6 Months
Max. height	24 meters		

3D-CONFIGURATOR

With the help of our 3D Configurator you are able to convert all your wishes and ideas into a 3D design.

We developed this tool specifically for our customers to quickly iterate on the design of their warehouse layout. With just a click you can request a quote for your designs or assistance from a Logiqs sales engineer.



This online tool drastically speeds up our quotation times and capacity allowing us to quickly quote layouts submitted by our customers and partners worldwide.

This also allows us to collaborate efficiently with our partners and end-customers remotely during the layout design stage of the project.

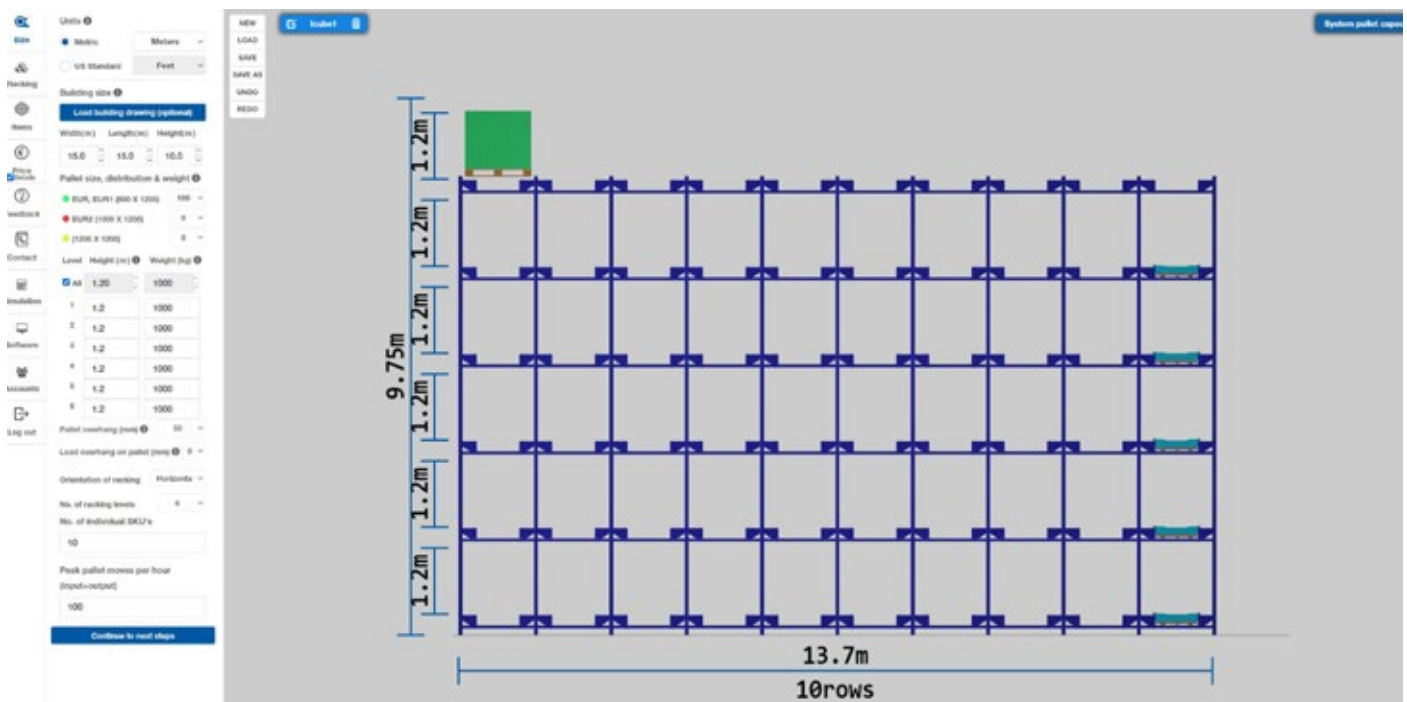
DESIGN CO-CREATION

The role of co-creation in our design process:

Allows us to focus on the product development and bringing new innovations to life;

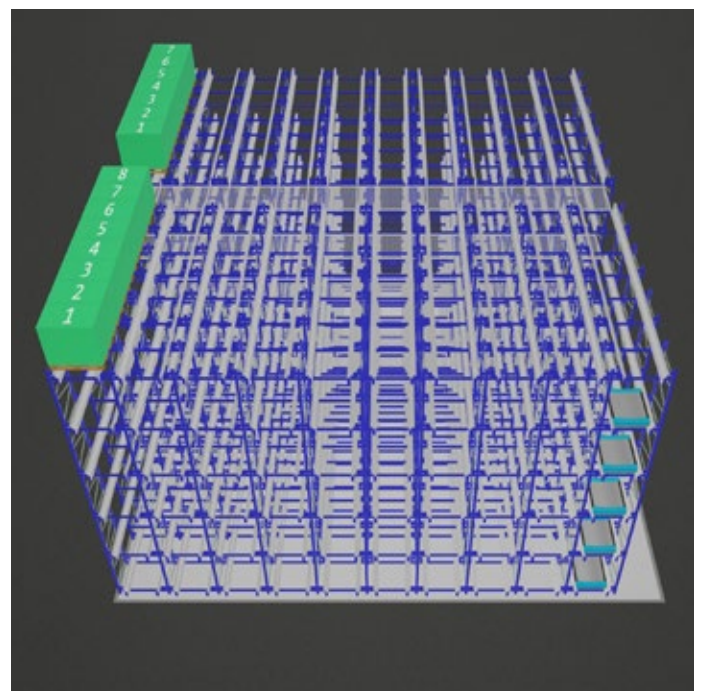
It allows us to leverage the user experience and know-how to collaboratively create more efficient logistics systems than ever before;

Helps us structurally lower engineering requirements for each product leading to lower costs and shorter lead times for our systems.



We expect that this 3D tool will streamline the quoting stage, the design/configuration stages as well as the engineering and commissioning processes. This allows us to offer our customers better lead times for projects with even more competitive prices than before.

See for yourself just how easy it is to design your warehouse, register your free account and start designing.





Logiqs has more than 45 years of experience and know-how, gained in the field of internal transport and logistics systems.

Our industry leading solutions help our clients achieve a higher profitability and a stronger competitive position within their marketplace.

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