Problem Guide | PG-01

CoreLogis

Running Out of Warehouse Space?

A practical guide to increasing storage capacity without immediately expanding your building.



Higher storage density

Better space utilization

Scalable for future growth

Consult. Design. Deliver. Support

A FAMILIAR SITUATION

How the space problem develops

A warehouse rarely becomes **full overnight**.
The warning signs usually **build over time**.

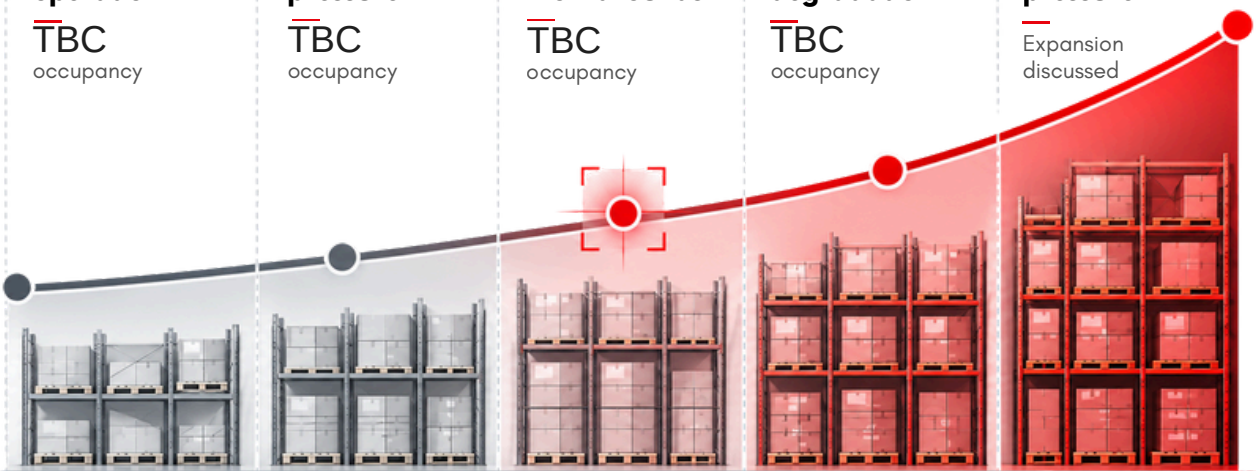
01 **Stable operation**
TBC
occupancy

02 **Capacity pressure**
TBC
occupancy

03 **Operational workarounds**
TBC
occupancy

04 **Performance degradation**
TBC
occupancy

05 **Expansion pressure**
Expansion discussed



Who feels the pain

Warehouse Manager
Sees congestion

Operations Manager
Sees productivity loss

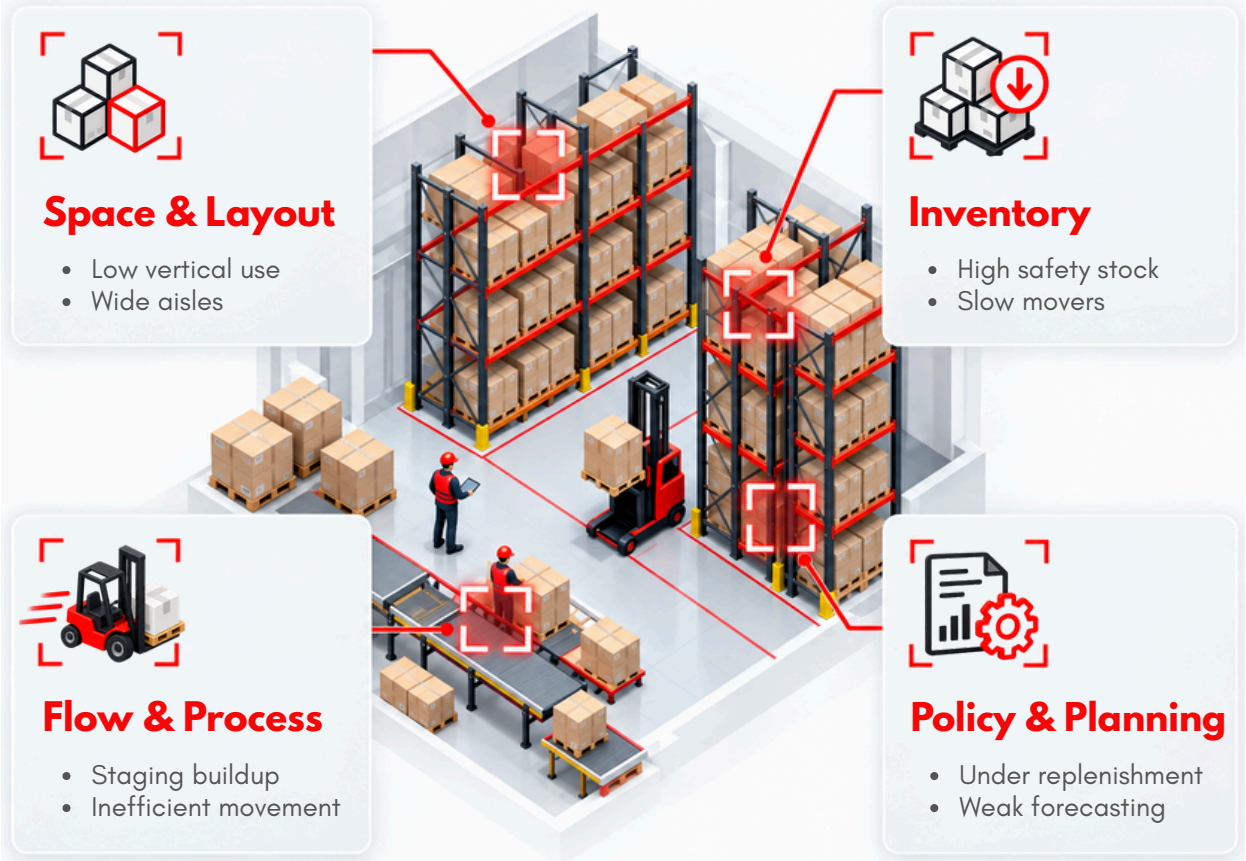
Supply Chain Head
Sees capacity risk

Management
Sees expansion CAPEX



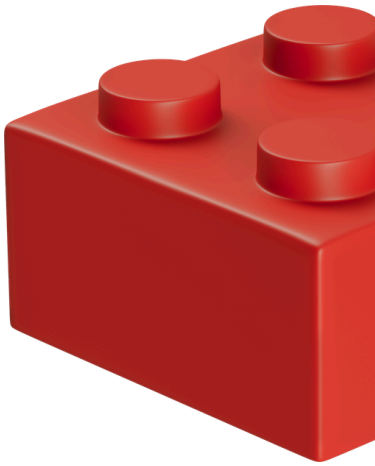
What's Really Driving the Space Pressure?

Space pressure is often a **symptom**. The **root cause** usually sits in how **space, inventory, flow,** and **planning interact.**





What Should Be Measured?

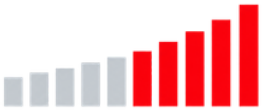


You cannot solve a **capacity problem** you have **not quantified**.

01 Occupancy

How full the storage system really is.





Storage occupancy

02 Vertical utilization

How much clear height is being used.





Used height / Total height

03 SKU profile

How many SKUs and how they behave.

1,250

Total SKUs

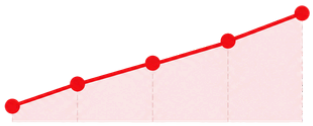


04 Inventory days

How long stock stays in the building.

46

Days on hand



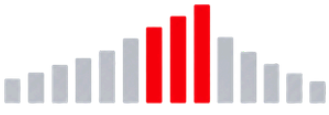
Inventory days trend

05 Throughput

Inbound and outbound movement intensity.

TBC

Unit: TBC



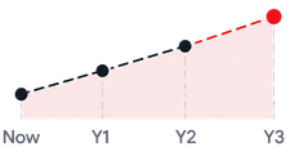
Inbound / Outbound (daily)

06 Growth

Expected future demand and capacity pressure.

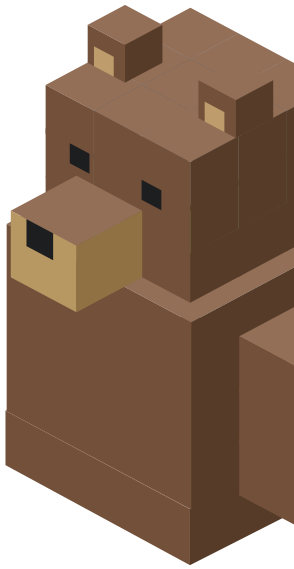
+25%

Forecast growth (2-3 years)



Illustrative examples only; not equipment ratings or measured project results.

Four Ways Capacity Can Improve



Not every space problem needs **full automation.** Capacity can improve across a **spectrum of interventions.**

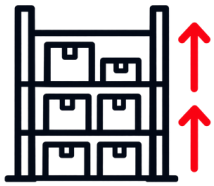
01



Occupancy

Improve slotting, replenishment, and inventory policy.

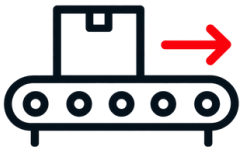
02



Layout

Reconfigure racking, aisles, and vertical use of space.

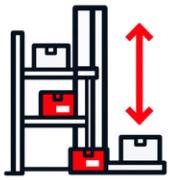
03



Semi-Automation

Introduce guided handling and higher-efficiency flows.

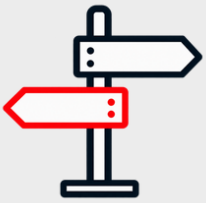
04



Full Automation

Use AS/RS only when the operation truly justifies it.

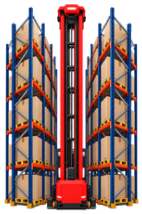
Lower Complexity & CAPEX → **Higher Complexity & CAPEX**



The best answer is not the most advanced option.
It is the best-fit option.

Which Path Fits the Operation?

There is no **single winner**. The **right architecture** depends on the **operation profile**.

	 Selective	 VNA	 Stacker Crane	 4-Way Shuttle	 Hybrid
Space pressure	●●● Low	●●● Medium	●●● High	●●● Very High	●●● Medium – High
SKU profile	●●● Wide / Varied	●●● Medium	●●● Low	●●● Medium	●●● Medium – High
Throughput	●●● Low	●●● Medium	●●● High	●●● Very High	●●● Medium – High
Building constraints	●●● Most flexible	●●● Medium	●●● High (ceiling height)	●●● Medium	●●● Medium
Growth	●●● Good	●●● Good	●●● High	●●● Very High	●●● High

Concept comparison only; configuration and site suitability require engineering review.

TECHNOLOGY PARTNER REFERENCE

TOYOTA

High-Density Part Storage

Automotive . Tote Storage . High-Density Fulfillment



PROJECT OUTCOMES

Pending verification

THE CHALLENGE

High-density storage for automotive parts within a constrained footprint while maintaining high throughput and operational efficiency.



THE ARCHITECTURE

DELIECN Mini-FlyBox

High-bay tote storage with narrow aisles and automated horizontal / vertical movement, designed for high-density fulfillment of automotive parts.



ENGINEERING PROFILE

TBC racking height	860 mm single-deep aisle	**600 x 400 mm** standard tote size	
50 kg max payload	Up to **3 m/s** travel speed	Barcode positioning & closed-loop servo control	

The right architecture follows
the operation, not the other way around.

More Space or Better Space?

A structured diagnosis **helps** determine whether the real need is e**xpansion, optimization,** or **automation.**

START HERE

Why do you feel you're running out of space?

1



Is demand temporary?

YES



Inventory / process first

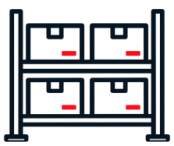
Adjust inventory, improve processes, and smooth demand peaks.

2



Is vertical space underused?

YES



Layout / high-bay evaluation

Reconfigure layout or evaluate high-bay racking.

3



Is throughput also constrained?

YES



Automation architecture evaluation

Assess automation options to increase throughput.

4



Is growth structural and long term?

YES



Capacity roadmap

Plan for expansion with a phased roadmap.