# **INDUSTRIALIZE**

The Insider's Guide

to

Industrial Real Estate

Chad Griffiths



Order Full Book: https://mybook.to/industrialize

or



# **Table of Contents**

1. What Is Industrial Real Estate?	1
2. Factories & Manufacturing Facilities	5
3. Warehouses / Distribution Centers	11
4. Flex Industrial	
5. Industrial Outdoor Storage (IOS)	21
6. TechFlex / Powered Industrial	
7. Land	33
8. Site Selection	39
9. Logistics and Supply Chain Management	43
10. Zoning	
11. Measurements	
12. Architecture and Design	59
13. Construction	65
14. Loading	79
15. Ceiling Heights	85
16. Column Grids	89
17. Site Coverage Ratio	95
18. Electrical	99
19. Lighting	105
20. HVAC (Heating, Ventilation, and Air Conditioning)	109
21. Roofs	115
22. Sprinklers	121
23. Racking	127
24. Cranes	137
25. Utilities	145
26. Drainage	155
27. Insurance	161
28. Legal Considerations	169
29. Common Documents & Forms	175
30. Tenant Improvements (TIs)	179
31. Reports and Due Diligence	
32. Financing	191
33. Risks and Potential Pitfalls	
34. Additional Considerations	203
35. Tools and Platforms	209
36. Conclusion	217

Appendix A: Take Action!	
Appendix B: Further Reading	225
Appendix C: Industrial Real Estate Glossary	
Index of Figures	232
Index	232

# 1

# What Is Industrial Real Estate?

INDUSTRIAL REAL ESTATE is everywhere. In North America alone, industrial real estate is a \$2 trillion market that impacts every part of daily life—from the food we eat to the packages delivered to our doors.

The concept of constructing spaces dedicated to industry isn't new. Centuries ago, simple structures were built to store goods or produce essential items. Today, industrial real estate has evolved dramatically, becoming the backbone of global commerce and everyday life.

Industrial real estate includes properties specifically designed to support essential business operations—so integral that modern life would be unimaginable without them. From manufacturing and storage to high-tech data centers, industrial real estate quietly powers the modern world.

The 2020 pandemic underscored the critical role of industrial real estate. While offices and retail spaces temporarily shut down, warehouses and factories remained operational, ensuring essentials like food, medical supplies, and online orders continued flowing. Industrial real estate doesn't just support businesses—it supports society.

Industrial real estate is divided into distinct categories, which we'll explore further in upcoming chapters:

#### **Factories**

Facilities specifically designed for manufacturing, processing, or assembling goods from raw or semi-finished materials.

#### Warehouses

Buildings primarily used for storage, distribution, logistics management, and freight handling.

#### Flex Properties

Industrial-zoned properties combining industrial space with other uses such as offices, labs, showrooms, or mixed-use business spaces. Common examples include research facilities, self-storage, and hybrid spaces.

#### Industrial Outdoor Storage (IOS)

These properties offer secure outdoor storage for equipment, vehicles, or materials and typically feature large yard spaces with minimal structures.

#### **TechFlex**

High-tech industrial facilities like data centers, semiconductor fabrication plants (fabs), electric vehicle manufacturing plants, and other specialized, technology-intensive spaces.

#### Historical Perspective

Industrial real estate has a rich history, evolving from basic storage sheds and workshops into the sophisticated, purpose-built facilities seen today. Its growth has closely paralleled advancements in technology, transportation, and global trade, becoming a cornerstone of economic development.

# **Economic Impact**

The industrial real estate sector drives significant economic activity, creating millions of jobs across construction, manufacturing, logistics, and supply chain management. It stimulates regional growth by attracting businesses and encouraging infrastructure development.

# Without this infrastructure, global trade would face significant disrupttions.

Warehouses and distribution centers strategically located near ports, railways, and highways ensure seamless movement of goods worldwide.

#### Modern Trends

Industrial real estate continually evolves. E-commerce has dramatically increased demand for warehousing and fulfillment centers. "Companies are increasingly investing in automation, robotics, and energy-efficient facilities to meet evolving industry demands.

#### Future Outlook

The future of industrial real estate is promising. Urban logistics, multi-story warehouses, manufacturing resurgence, and smart technologies will further redefine the sector. The demand for innovative, adaptable spaces will grow as businesses evolve and consumer expectations shift.

Two Key Themes Keep these two fundamental concepts in mind as we explore industrial real estate throughout this book:

- 1. Tenant-Centric Value: the primary purpose of industrial properties is to support the businesses that occupy them. The usability, functionality, and value of any industrial property ultimately depend on how effectively it serves tenants. Simply put, a property's worth directly ties to the rent a company is willing to pay for its use.
- 2. Risk Management First: Always understand and quantify downside risks first. While developing forecasts and proformas can be engaging, the primary focus must remain on objectively identifying and managing potential risks.

These guiding principles will serve as a compass for navigating the complexities and opportunities of industrial real estate.

# 2

# Factories & Manufacturing Facilities

MANUFACTURING FACILITIES OPERATE on a deceptively simple premise: raw materials arrive, undergo transformation through manufacturing, production, or assembly, and leave as finished products. Yet beneath this straightforward process is immense complexity, shaped by diverse operational needs and specific facility requirements.

#### Types of Manufacturing Facilities

When most people think of manufacturing, they might imagine heavy industrial facilities, such as large factories or even old, dirty buildings. However, Manufacturing spans a broad spectrum, from heavy industrial properties to lighter manufacturing spaces.

Let's break it down into sub-categories:

## Heavy Industrial

A metal fabricator that welds, cuts, burns, and machines raw materials exemplify this category. Significant noise, heavy equipment, and emissions are common characteristics.

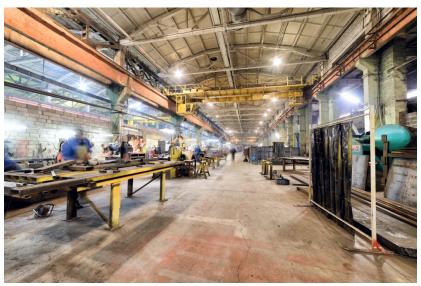


Figure 1: A Heavy Industrial Building

#### Medium Industrial

A plastic injection molding manufacturer is an example of medium industrial. Operations typically involve moderate power requirements, specialized equipment (like injection molding machines), and moderate yard space for storage.

# Light Industrial

Companies assembling computer parts or electronics often operate in clean, quiet facilities resembling office spaces rather than traditional factories.



Figure 2: Computer fabrication inside a light industrial building

Given the diverse types of businesses, assigning labels to properties can be challenging. Sometimes it's helpful to consider zoning classifications.

#### **Zoning Considerations**

Zoning regulations determine which businesses can operate within a property. Municipalities often classify industrial zoning into subcategories (light, medium, or heavy industrial), though some apply broader, or even narrower, definitions.

Key point: Always verify zoning to ensure the intended use is permitted before committing to a property. Unless working in a rare area without zoning laws, confirm that prospective tenants can secure the necessary municipal permits. Contracts should include conditions ensuring tenants obtain necessary permits before proceeding.

#### Customization for Tenants

Manufacturing properties must meet tenants' specific operational needs. Ensuring facilities remain competitive within their class involves addressing several critical considerations:

#### **Electrical Power**

Adequate electrical capacity is crucial for manufacturing operations reliant on heavy machinery and specialized equipment. Companies running heavy machinery, robotics, welding equipment, or other high-powered industrial processes typically require substantial electrical capacity (commonly 480-volt, three-phase service). Property owners must confirm existing capabilities and clearly document them, including transformer capacity and panel configurations. Evaluating upgrade costs early can help landlords attract tenants reliant on power-intensive equipment. Prospective tenants should always perform detailed electrical audits and verify infrastructure independently to ensure compatibility and to avoid costly surprises after occupancy.

#### Cranes and Specialized Equipment

Many manufacturers require overhead cranes for efficient and safe material handling, assembly, or heavy fabrication processes. Facilities designed to accommodate cranes from the outset offer significant competitive advantages. These properties include crane rails, suitable column spacing, adequate ceiling heights, and structural supports engineered specifically for overhead lifting. Conversely, retrofitting an existing building to install cranes later often incurs substantial costs due to necessary structural reinforcements, extensive recertification processes, and potential production disruptions during modifications.

## **Building Ratios and Interior Configurations**

The ratio of office space to production or warehouse areas can significantly influence a property's attractiveness. Facilities that deviate substantially from market norms may necessitate expensive reconfiguration to meet tenant requirements. Examples include properties with excessive or insufficient office space relative to warehouse or production space. Modular interior walls, flexible office layouts, and adaptable production spaces are advantageous in accommodating various tenant needs without extensive renovations.

# Structural Integrity and Load Capacities

Manufacturing companies utilizing heavy machinery, large-scale assembly equipment, or dense materials storage must ensure the facility's structural integrity aligns with their operational demands. Key structural considerations include verifying concrete slab thickness and reinforcement, mezzanine load capacities, floor flatness for equipment stability, and column

spacing to accommodate machinery layouts. Tenants often conduct detailed structural assessments during due diligence to confirm that existing specifications align with operational requirements.

#### Site Layout and Yard Space

The site coverage ratio (building footprint relative to site size) is crucial for manufacturing properties. Adequate yard space is essential for storing equipment, raw materials, finished goods, and vehicle maneuverability. Specific site considerations include:

**Gravel Quality:** High-quality, compacted gravel is important to ensure proper drainage, avoid soft areas, and accommodate heavy vehicles and equipment without damage.

Exterior Lighting and Security: Robust outdoor lighting and secure perimeter fencing provide essential security, enhance operational safety, and ensure regulatory compliance.

Truck and Equipment Maneuverability: Sufficient turning radii, paved access points, and clearly marked staging areas enhance logistical efficiency and reduce bottlenecks.

### Fire Safety, Air Quality, and Environmental Considerations

Sprinkler Systems: Sprinkler systems are typically mandatory for fire safety in manufacturing environments due to high risks associated with machinery, storage, and combustible materials. Understanding whether sprinkler installations are driven by municipal codes, insurance requirements, or tenant operational standards is critical, as installation or upgrades can be costly.

Makeup Air Units (MAUs): MAUs are essential for maintaining indoor air quality by replenishing fresh outdoor air in spaces with significant exhaust or particulate generation. While not universally mandatory, they are increasingly required by municipalities and highly desirable for tenants to meet workplace safety and comfort standards.

Environmental Compliance: Manufacturing properties must comply with local environmental regulations, particularly concerning waste management, emissions, noise, and chemical storage. Facilities proactively equipped with containment, filtration, or specialized waste systems have a competitive edge.

#### Adaptability and Futureproofing:

To remain competitive, industrial properties should incorporate flexible designs that accommodate diverse processes and future tenant needs.

Examples include reinforced floor slabs for heavy machinery, expandable electrical capacity, modular office layouts, and infrastructure capable of supporting future automation or technological upgrades.

#### Expert Insight

"When you're buying manufacturing real estate, you're knowingly accepting a binary risk—either the tenant stays or they don't. That's why it's crucial to buy properties where the tenant is producing something essential, durable, and embedded into the backbone of the economy. You need assets that have survived globalization, outsourcing trends, and economic cycles, because that's what creates long-term stability."

—Aaron Halfacre, CEO of Modiv Industrial

Manufacturing facilities embody much more than physical structures—they are intricate systems critical to our economy. Halfacre's observation underscores the importance of understanding the long-term sustainability of the products being manufactured, along with tenant stability. Selecting facilities aligned with core economic functions, with tenants who have endured various market disruptions, significantly reduces investment risk and secures long-term value.

## Summary

Manufacturing facilities are inherently diverse, reflecting the unique operational demands of their occupants. While no property can meet every company's needs, designing flexible, adaptable facilities that address tenant-specific requirements ensures long-term competitiveness. Properties addressing power availability, structural integrity, yard functionality, safety systems, and environmental compliance will attract tenants more effectively, maximize occupancy, and secure long-term property value.