

Future of Warehouse

Cameron Williams,

DIRECTOR OF RESEARCH, SVN INTERNATIONAL CORP.

RETAIL REVOLUTION: SHARED WAREHOUSES AND SOLAR INTEGRATION RESHAPING LOGISTICS LANDSCAPE

The **industrial real estate sector is a dynamic asset class undergoing a multitude of transformative changes**. By 2025, online retail is projected to account for a quarter of total purchases, **driving the rise of direct-to-consumer (DTC) brands and the demand for expedited shipping**. This has prompted smaller brands to spur the development of shared logistics facilities, **offering warehousing and logistical services to meet this growing need**.

Traditional large-scale warehouses are facing saturation, leading to a shift towards suburban and urban developments. This involves repurposing office spaces into smaller warehouses, **putting pressure on communities** to rethink traditional zoning requirements to accommodate this transition.

The **integration of solar energy on industrial rooftops is gaining momentum**, fueled by financial incentives and technological advancements that have **significantly enhanced the potential return on investment for solar installations**. Simultaneously, the advent of automation, particularly in the form of artificial intelligence and robotics, is transforming warehouse operations, enhancing efficiency, and mitigating potential liabilities associated with human labor.

SHARED SPACE

By 2025, **25% of retail purchases are expected to be made online**, up from 16% in 2019.

Direct-to-consumer (DTC) brands have **grown by 25% YOY since 2019**.

Consumers expect **two-day shipping**, driving demand for shared logistics facilities.

Shared warehouse spaces provide **flex office space, picking, packing, and warehousing**.

ROOFTOP SOLAR

The United States currently has **1.5 billion square feet of industrial rooftop space** viable for solar installation.

Prologis is halfway to goal of **producing a gigawatt of energy by 2025**.

The average **50,000 sq ft warehouse uses 400,000 kWh/year**; but could produce up to **1.2 million kWh/year** if equipped with high efficiency solar.

Various Federal incentive programs include **Investment Tax Credit (ITC)** and **Modified Accelerated Cost Recovery System (MACRS)**.

NON-TRADITIONAL DEVELOPMENT

Over development of large scale warehouse space has **led to plateauing rents**.

Instead of new construction there is a rise in the repurposing **“fried egg” style suburban office property land** for smaller last-mile warehouses.

The US has just begun to see **its first multi-level warehouses located in city centers**. This style of building is a rarity in the US but already very common in land constricted areas of Asia and Europe.

ROBOTS AND AI

AI, drones, and Autonomous Mobile Robots (AMR) are **revolutionizing warehousing**.

AI reportedly **improves logistics costs by 15%**, inventory levels by 35%, and service levels by 65%.

The AMR sector is currently valued at nearly **\$2 billion**, and **expected to reach \$14.4 billion by 2030**.

Picking efficiency increased by **100-300%** with robots that can also **operate 24/7**.

Increased weight thresholds have been successful and the **drone delivery pilot program** by Walmart and Alphabet's Wing in the Dallas Metro Area have already executed more than **20,000 drone deliveries**.

