Wheelift
A Doerfer Companies' Technology

Prefab Building Industry

CASE STUDY

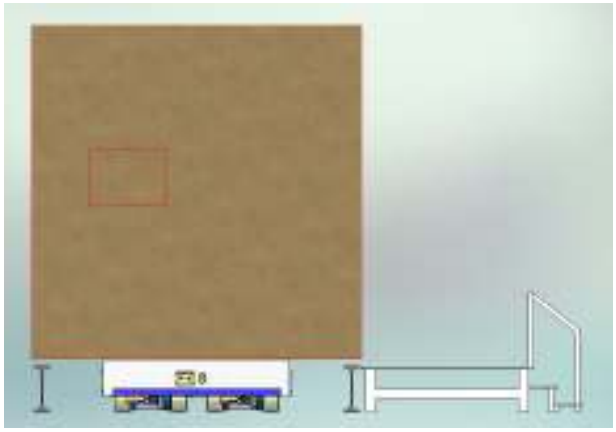
The nation's leading manufacturer of concrete structures for corrections, telecommunications and education discovers Wheelift's Omni-directional Transporters for indoor and outdoor use in their 200,000 sq. ft. mfg. facility building 20-100 ton fully furnished precast rooms.

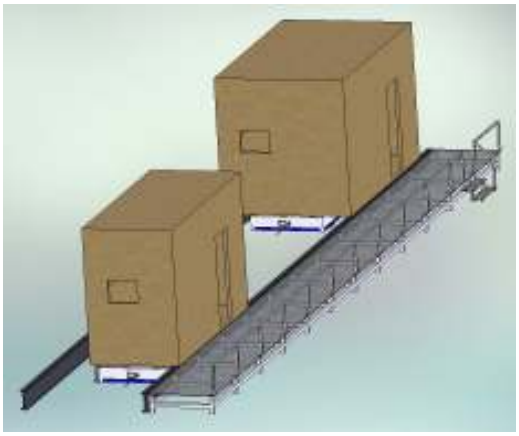
Challenge: To design an inline build process, requiring inside and outside room access at all stations providing flexibility for line reconfiguration for dedicated lot runs and for unknown future production line arrangements.

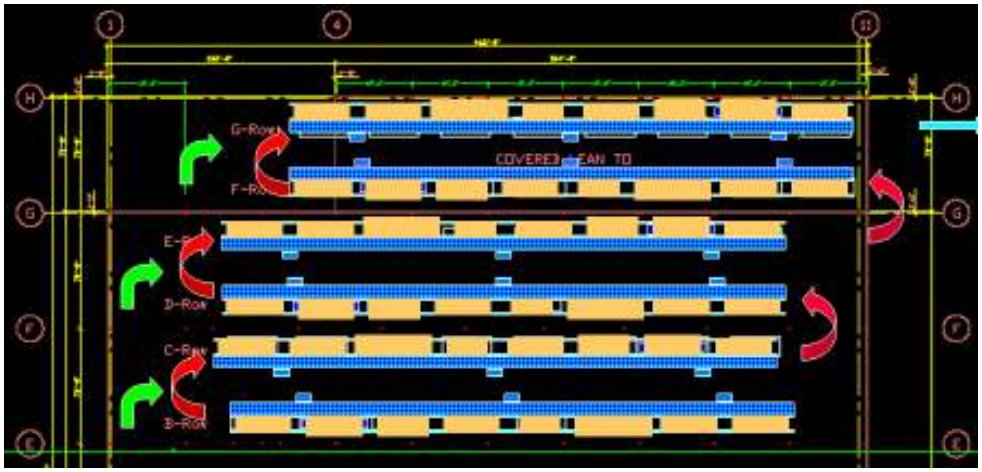
Solution: Provide (3) - identical Omni-directional Transporters for movement of in-process rooms throughout the manufacturing floor consisting of 5-build rows, each with eight tooling specific build positions providing capacity for 40 unique build stations.

Benefit:

- Allowed a cost effective inline build process
- Provided flexibility for product size, product routing strategies, line configuration, line balancing, and labor staffing
- Protected for future growth trends.







Wheelift
A Doerfer Companies' Technology

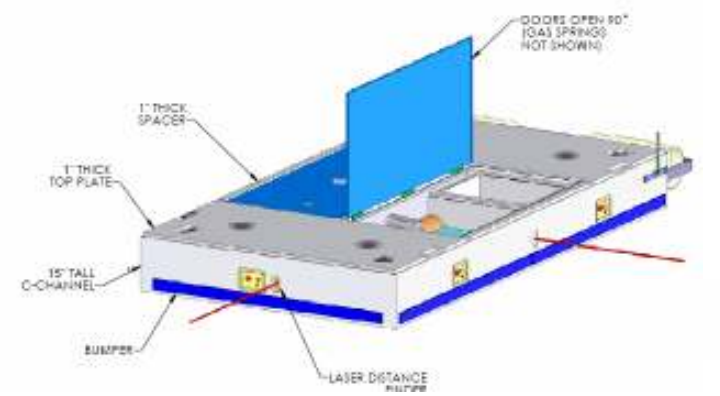
Static build positions and tow motors no longer sufficed to serve the rapidly expanding microwave communications and disaster relief markets that drove a wide variety of unique rooms to be built. As Henry Ford did decades ago, this manufacturing moved to a progressive inline build process using custom tooled stations with dedicated skilled trades people.

The Transporter sequentially indexes rooms forward 1 station at a time. The Transporter movements within each of the 5 assembly rows are automatically guided to within +/- 1" of center. Transporter moves external to the rows are by using a wireless pendant controlled.

The entire transportation system is a "lift-and-carry" indexing process. Picking up a room from the manufacturing floor consists of driving one or two transporters under the intended room and lifting them up in a "predetermined" position. The Transporters are designed to work singularly or in dual transporter tandem operations. 21' to 40' long rooms require two Transporters for movement.

When two tandem Transporters are required, the operators positions them together end-to-end, latches them together, and then switches the operator control to "Master/Slave mode" to operate multiple transporters with the single control. The "raise" switch is activated to raise the Transporters simultaneously, lifting the room. The operator then selects the appropriate travel mode and begins moving the room.

Process-driven features include a flat deck at 18" for product access from any direction, 3% slope capability, 5" vertical travel for self-loading and surface compliance, weatherproofing for travel to outdoor storage positions, umbilical cord power backup cable, wireless control, and fire suppression.



The **Modular Wheelift Chassis** provides a degree of flexibility not obtainable through other technologies. Wheelift Transporters and AGVs enable manufacturing flexibility with configurable work processes facilitating new design freedoms benefiting worldwide niche markets.

Manufactured in Iowa, **Wheelift** Transporters and AGVs are engineered to applications including assembly processes, build lines, material handling, close positioning die loading, and roll transfers. Load deck and fixturing is built to suit with load capacities to 500+ tons and deck heights as low as 18". Power options include LP gas, diesel, battery, or on-board generator. Electric or hydraulic drives are standard. For more information on Wheelift Transporters and AGV systems capabilities, please visit us at www.wheelift.com

Headquartered in Iowa, **Doerfer** develops application specific, custom manufacturing systems and machinery - many which revolutionize the way our customers manufacture, assemble, move, package, and test their products. We thrive on your toughest process challenges for manufacturing. For more information on our capabilities, please visit us at www.doerfer.com or email roy.linden@doerfer.com.

1801 East Bremer Ave. PO Box 816 Waverly, IA 50677 Phone: 319.483.4700