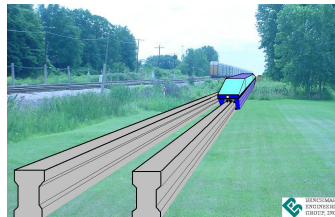


A collaboration of private firms, universities, and government agencies based in Northwest Ohio is developing a platform technology with significant market potential. The technology, Metropolitan Utility Linking Transportation to Industry – Freight Component (MULTI-Freight), facilitates the transportation of materials between suppliers and manufacturers in dense urban areas. It is a freight-only system that covers short distances and delivers parts reliably, inexpensively, and in a timely manner to support lean manufacturing while reducing pollutants and highway congestion.

MULTI-Freight applies global tracking technology, smart transportation systems, RFID, and computerized logistics planning to effectively manage and control material movement. The backbone of the system is a 2-way monorail pathway that avoids all at-grade crossings and can use existing rail, road, or utility rights-of-way. The system will link abandoned and underutilized industrial sites in metropolitan areas to interconnect properties and other transportation systems creating an intermodal transportation system to support manufacturers and their supply chains.

### Manufactured & Transportable Infrastructure



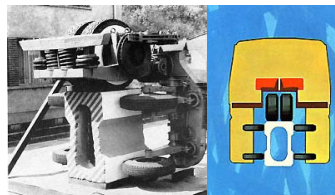
MULTI-Freight Beams on grade along Existing Right-of-Ways



MULTI-Freight Beams slope up eliminating At-Grade-Crossings



Products arrive at Assembly Plant on-time and undisturbed

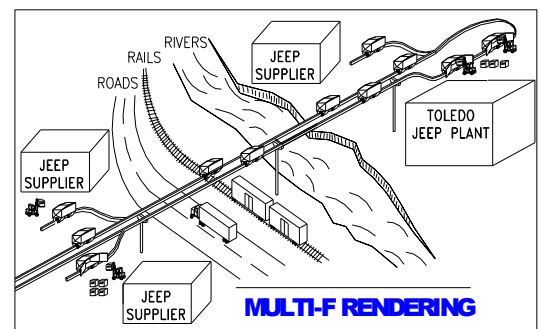


Monorail Straddle type (ALWEG)

### Technology Integration

- Two-Way Monorail Straddle type (ALWEG) existing standard monorail system with rubber tire bogies and car structure for freight use only
- Cars are electrically powered with high torque low speed (10 MPH) motors for long life and environmentally friendly
- Flat decked cars customized to carry sequencing racks with a removable protective top canopy
- Use RFID and GPS system to track and monitor cars and provide security
- Use supply chain management and fulfillment software for system scheduling and sequencing for deliveries

- Manufactured piers & beams pre-cast, post-tensioned and cured locally and shipped to site for installation
- Transportable and replaceable piers & beams shipped by truck to site for installation
- System can be expanded by adding new piers and beams as necessary along right-of-ways
- Main runs will be beam on-grade to save costs, only need piers and bridge beams to cross roads, railroads, and rivers.



### Benefits:

- 1. Economic - Make it cost effective for manufacturers to locate or stay in the Midwest**
- 2. Development - Capitalize on clustering multiple assembly plants and the supply chains**
- 3. Environmental - Reuse of land-locked brownfields while reducing pollution**
- 4. Infrastructure - Reduce truck and rail transportation bottlenecks & roadway maintenance**