IPRO - 307

ILLINOIS INSTITUTE OF TECHNOLOGY

Transforming Lives.Inventing the Future.

Intermodal Container Transport Solutions for the Chicago Region

Background:

- Modes of Transportation
  By Truck, Rail, Ship or Plane
- Intermodal Transportation
  Transportation between more than one mode of transportation
- Slip Seating
  Truckers slipping / switching seats with another to avoid long hauls

Problem:

- Transportation of Tonnage
  Truck, 69%
  Rail, 13.3%
  Rail Intermodal, 1.3%
- **Demand,** Tonnage is Up
- **Supply,** Trucking Fleet is Down
  2007, -2.6%
  Company Failures
  Hard Life Style
- Lack of Transportation Capacity

Objective:

- "Increase capacity with out increasing pollution"
  +50% Capacity = +50% Pollution
- Improve Slip Seating
- Maximize Land Capacity
- Utilize New Technologies to Improve Efficiencies

Methodology:

- Two Teams
  1) Facility Capacity Expansion
  2) Resource Management

Flipper:

Independent Container Removal

- Improves Machinery Time Management
- Improved Slip Seating
- Speeds Up Yard Processes

Land Capasity:

- Improved Traffic Flow
  50% Yard Expansion
  Added Entrance / Exit
- Land Limitations
  Vertical vs Horizontal Growth
  Austell Facility (1/2 Traffic & 2x Size)

IBC:

- Reduced Labor Costs
- Improved Traffic Flow

CNG:

- Compressed Natural Gas
  Alternatives: Diesel, Bio-Fuel, LNG
  Environmentally Friendly
  Availability, Energy Independence
  Pipeline Network
- CNG Station
  Utilizes Parking Space
  Generates Income
- CNG Conversion
  Engine Efficacies
  Plausibility

Light Towers:

100ft Towers

- Windmill
  Wind Velocity
  Green Energy
- Energy Efficient Lighting
  Cost / Benefit Analysis
  Long Pay Back Period

Conclusion:

- Flow capacity can be increased through innovation and growth with out damaging the environment and its resources.