



Introduction to SymoSat High Density Storage System



Company Background

- **Pallet Runner AB is developing, manufacturing and marketing high density storage (HDS) systems under the brand name SymoSat. The WEB address is symosat.com.**
- **Pallet Runner AB is marketed in North America under the brand name Pallet Runner (WEB address: palletrunner.com).**
- **Pallet Runner HQ is in Mjölby, Sweden in the materials handling research and development center of Sweden.**



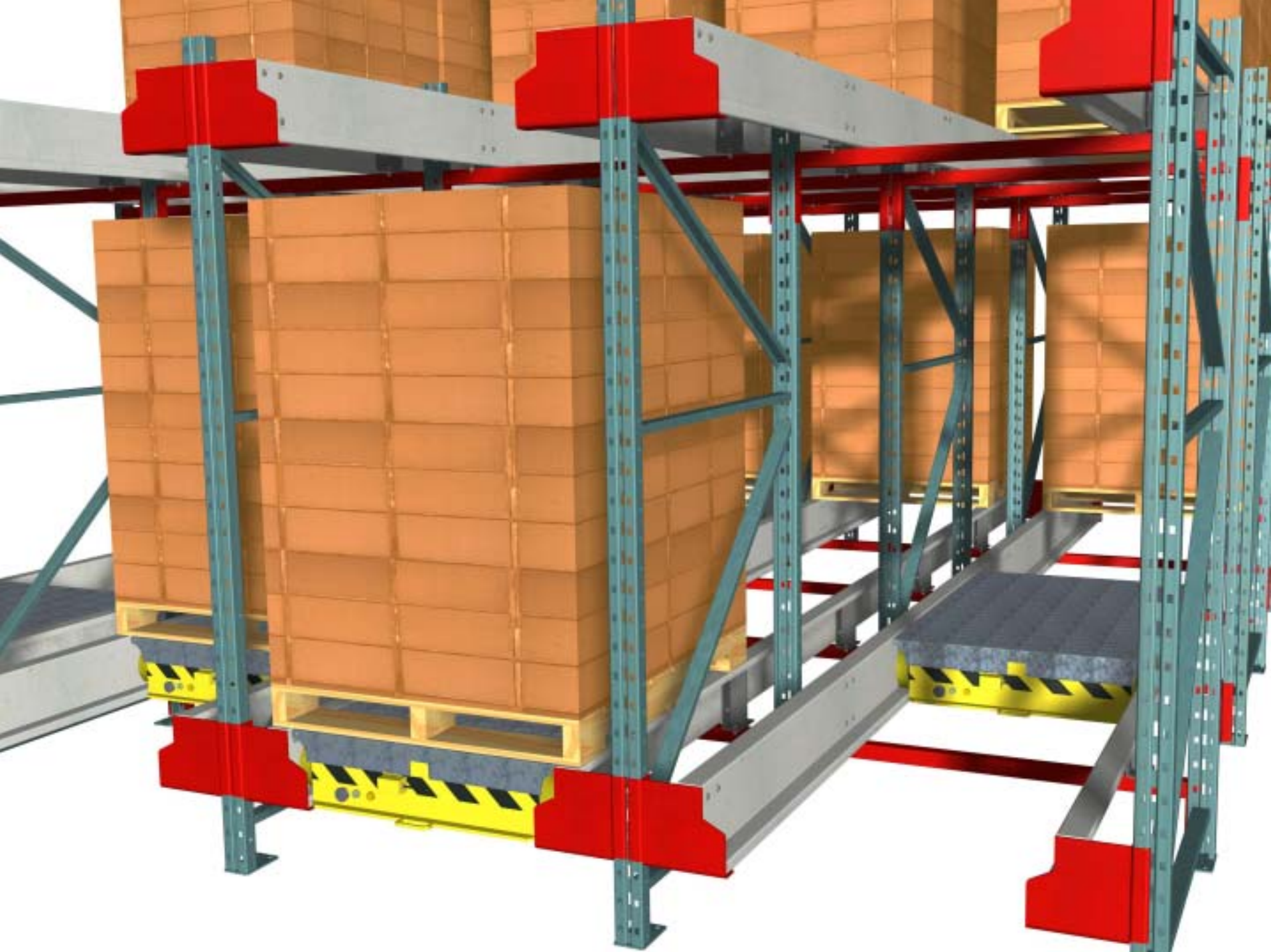
Company Background

- **The HDS technology originates in basic research and development work made by Pallet Runner in the last decade. Today Pallet Runner is the leading manufacturer with a number of successful installations in operation.**
- **Pallet Runner cooperates with leading rack manufacturers in Europe and North America. In Europe Travhydro is the number one partner, in North America it is the Econorack group.**



Overview

- **The SymoSat HDS system delivers on storing more pallets in your warehouse than any other type or Storage System while making efficient use of your existing Lift Truck Fleet!**
- **In more advance storage solutions the SymoSat system is an integrated part of the automated storage and retrieval system.**





- SymoSat Channel Rails are installed into an engineered Racking System
- Can also be retrofitted into an existing Drive-in System



- The SymaSat Cart is placed into the appropriate lane and is activated by the operator with the radio remote control
- The operator drives away to retrieve another pallet or deliver the pallet while the SymoSat Cart works on its own.



Remote Operator Functions

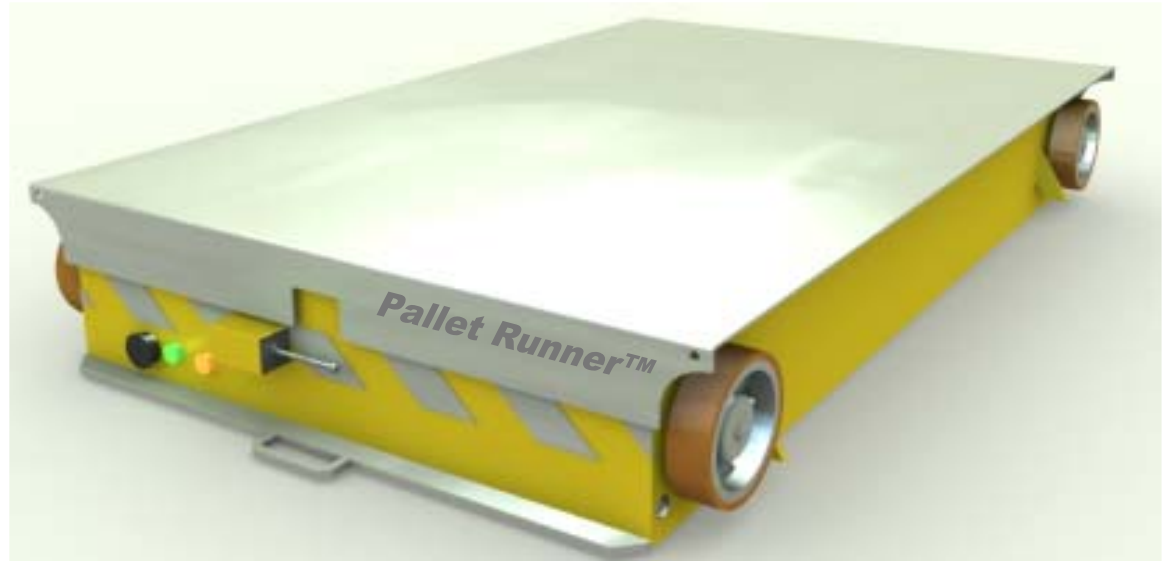
- **Load**– Pallet Runner Loads one pallet into lane
- **Auto Load**– Pallet Runner automatically loads pallets into lane when placed in load position
- **Unload**– Pallet Runner Unloads one pallet from lane
- **Auto Unload**- Pallet Runner automatically unloads pallets from lane when placed removed from load position
- **FIFO Shuffle**– Pallets are moved from load end to unload end of system



Features and Benefits



Remote Operation



- The SymoSat Cart operates remotely - with no external power source.
- This means your operator and the SymoSat Cart operate simultaneously.



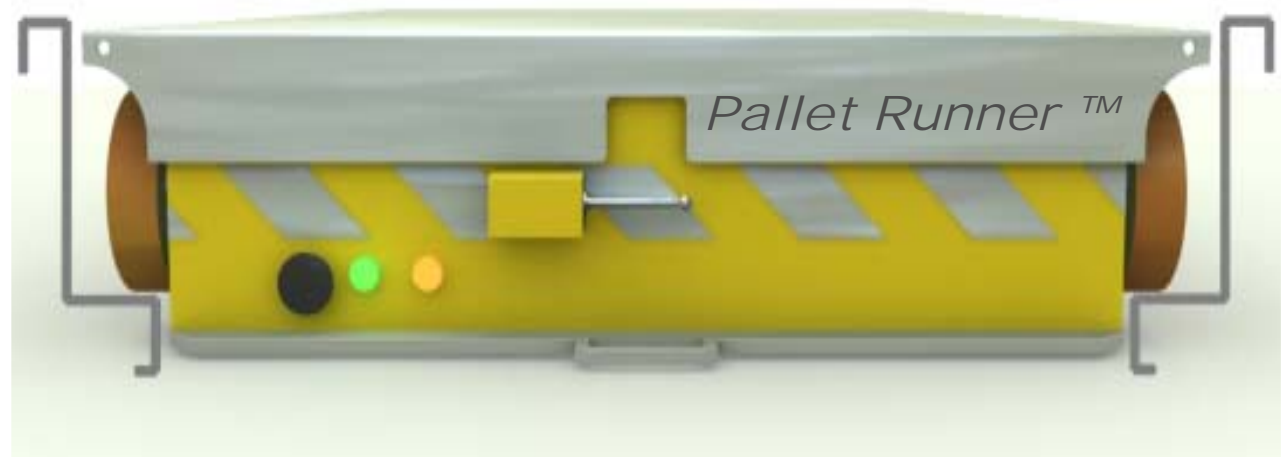
Battery



- The SymoSat cart uses a state of the art maintenance free battery.
- It will run for an amazing 20 hours without need for a recharge in a typical application!



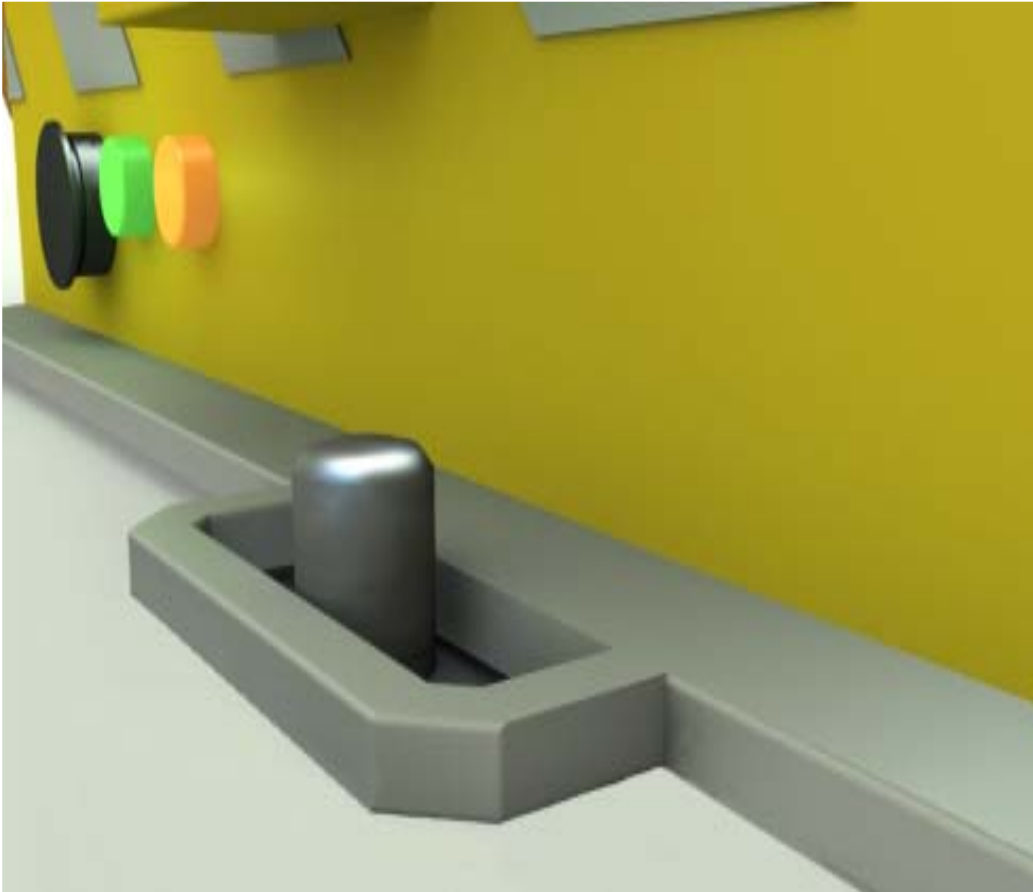
Easy Access



- The SymaSat Cart can be placed EASILY into the carrier rails at any level due to its uniquely designed channel. This virtually eliminates any possible rail damage.



Safety Lock



- Transporting ANYTHING without fork pockets or a restraining device can be dangerous and costly if the load is dropped.
- The SymoSat Cart uses a patented retaining pin to keep it safe and secured in place on the forks.



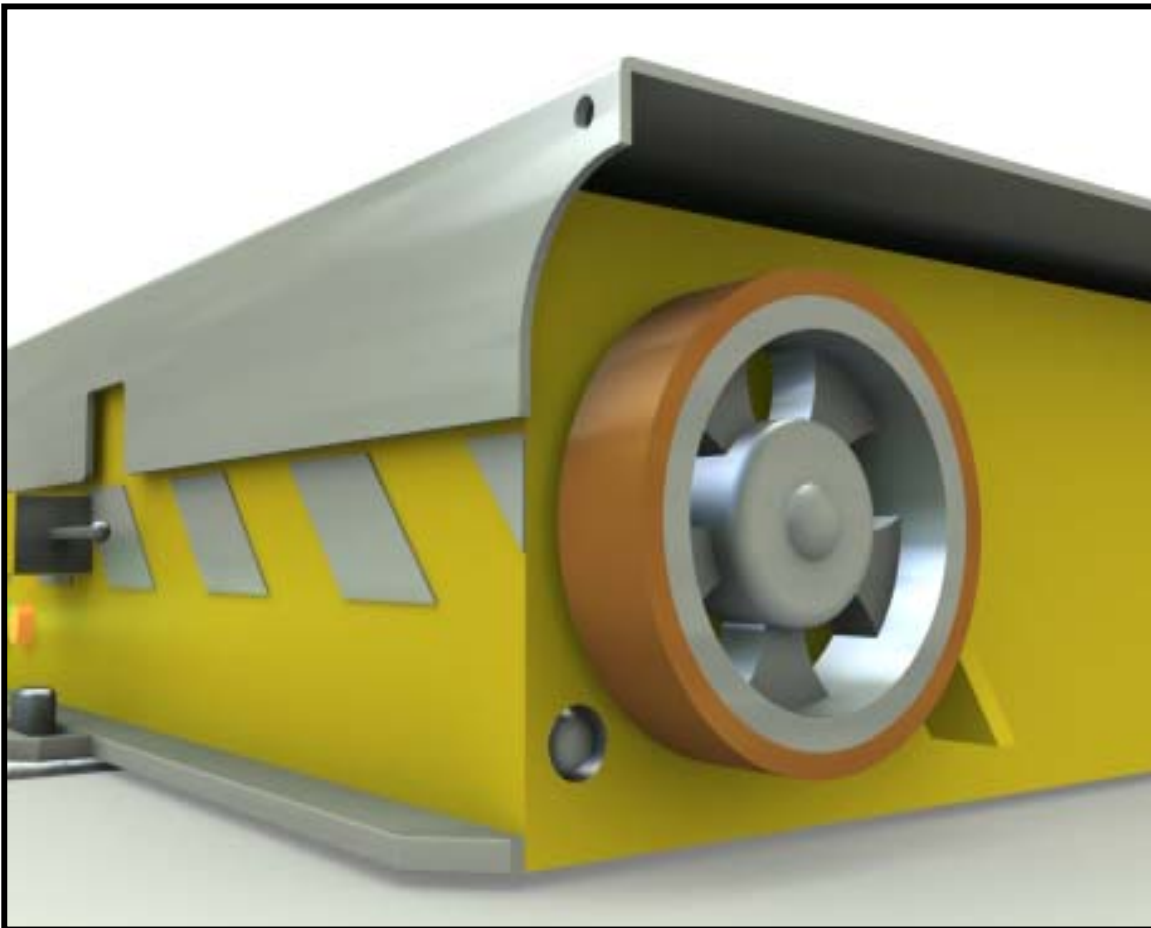
Full Lift Tray

- Pallets in the real world are not always in perfect shape or of similar size.
- Because the SymoSat Cart lifts the pallet with a **COMPLETE** Lift Tray there is no opportunity for the load to be mishandled.





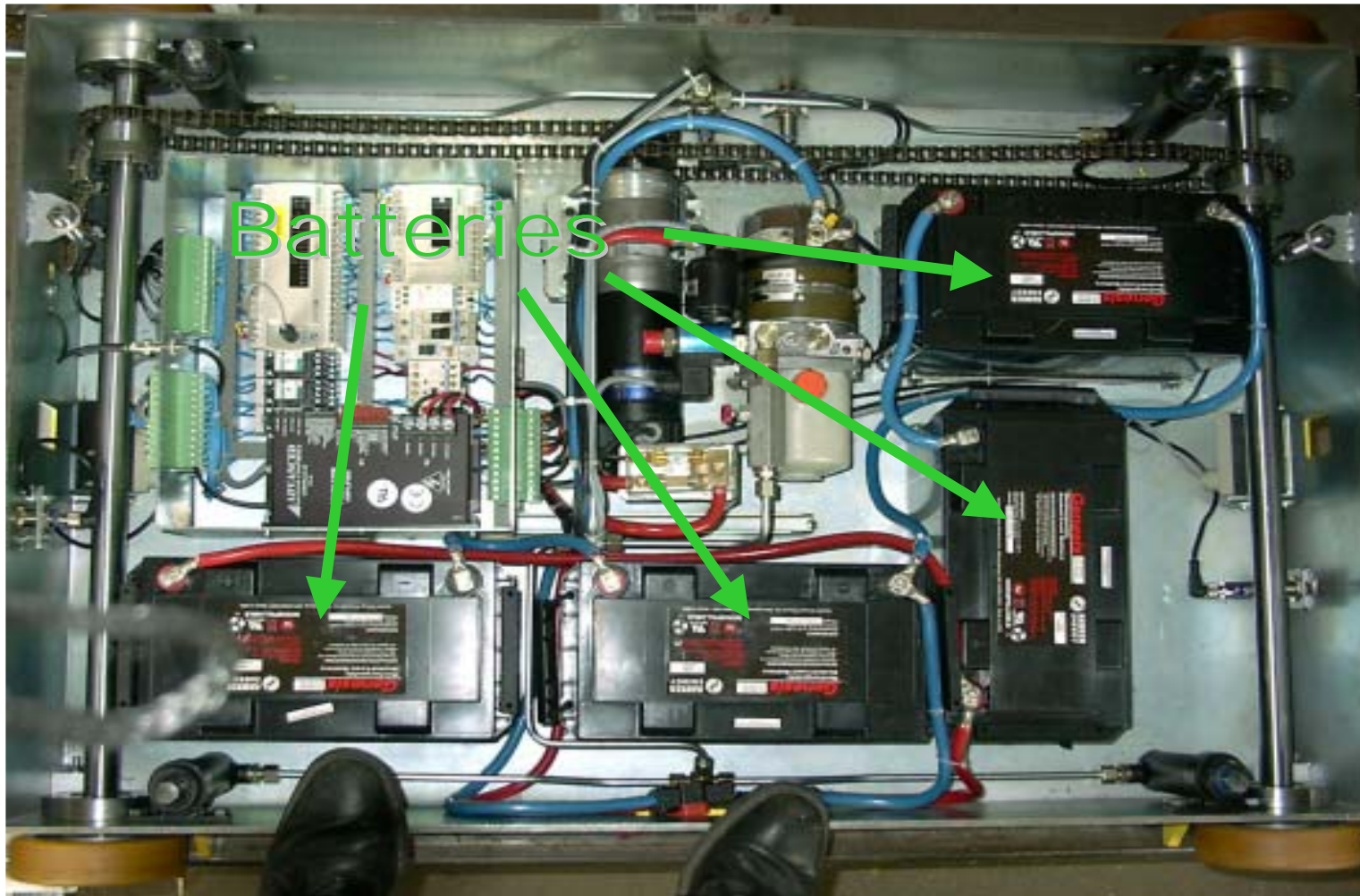
Large Diameter Wheels



- Ensures a smooth and consistent ride for the SymoSat Cart even in harsh environments.

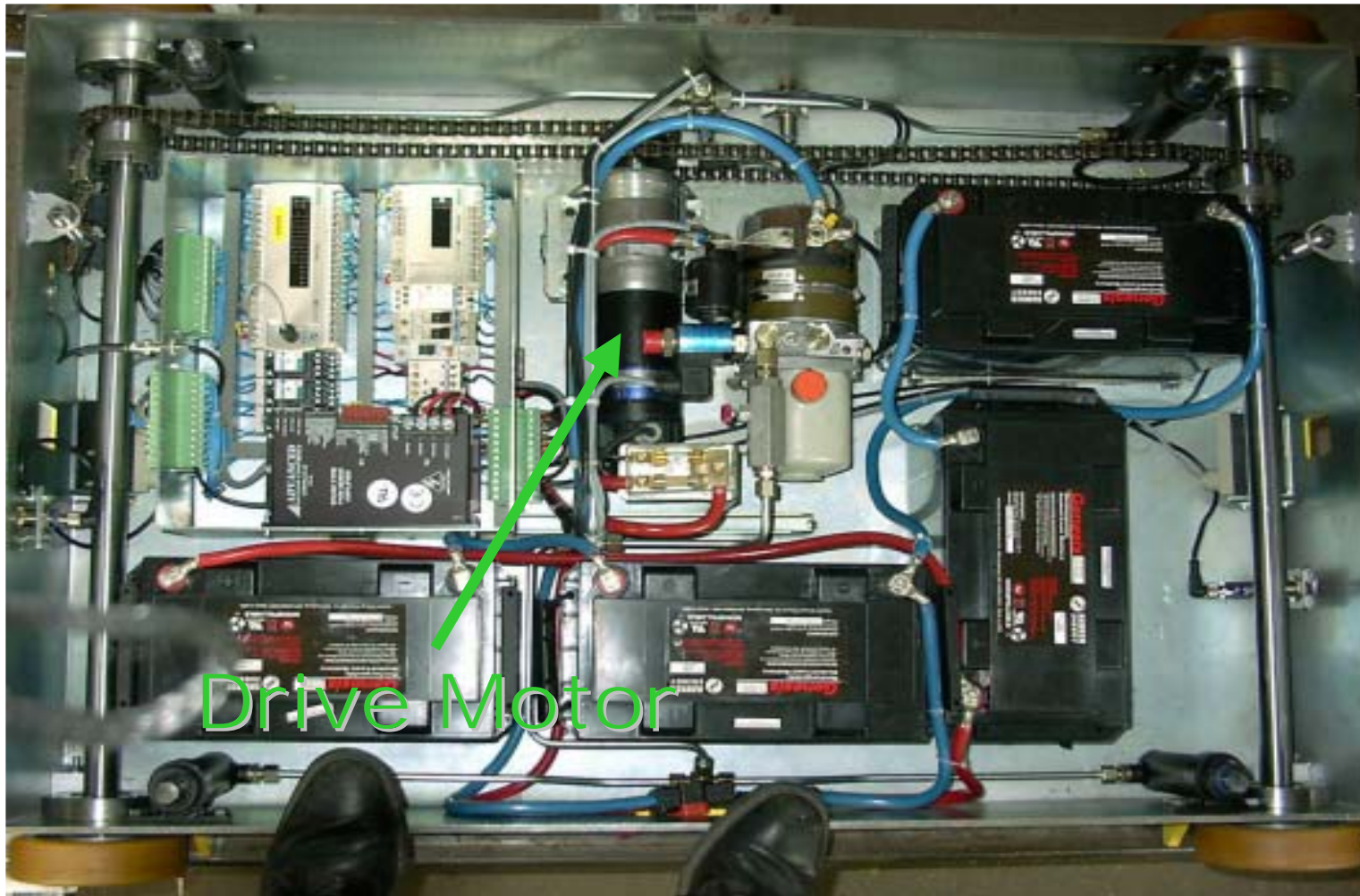


Interior Components



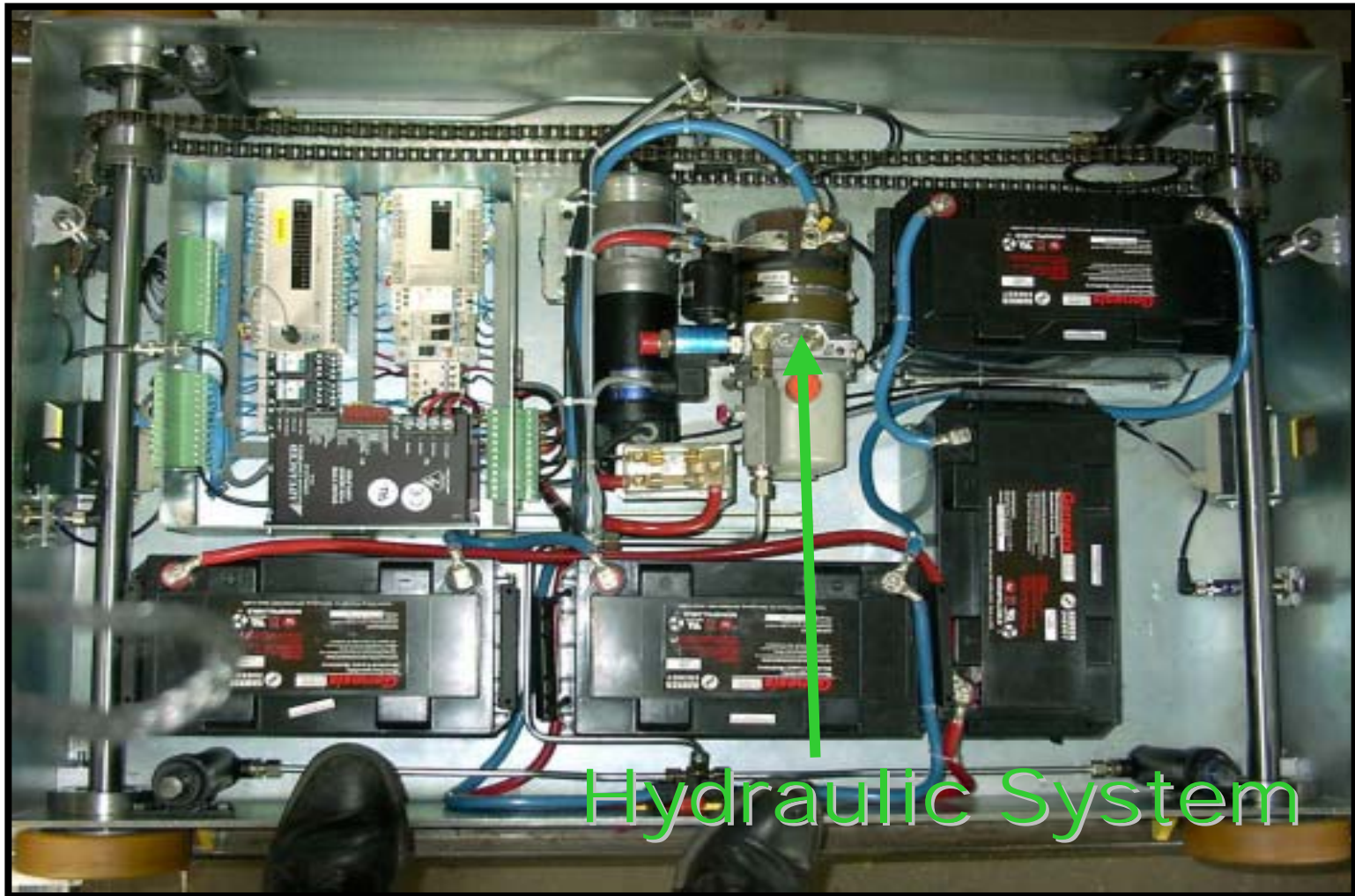


Interior Components





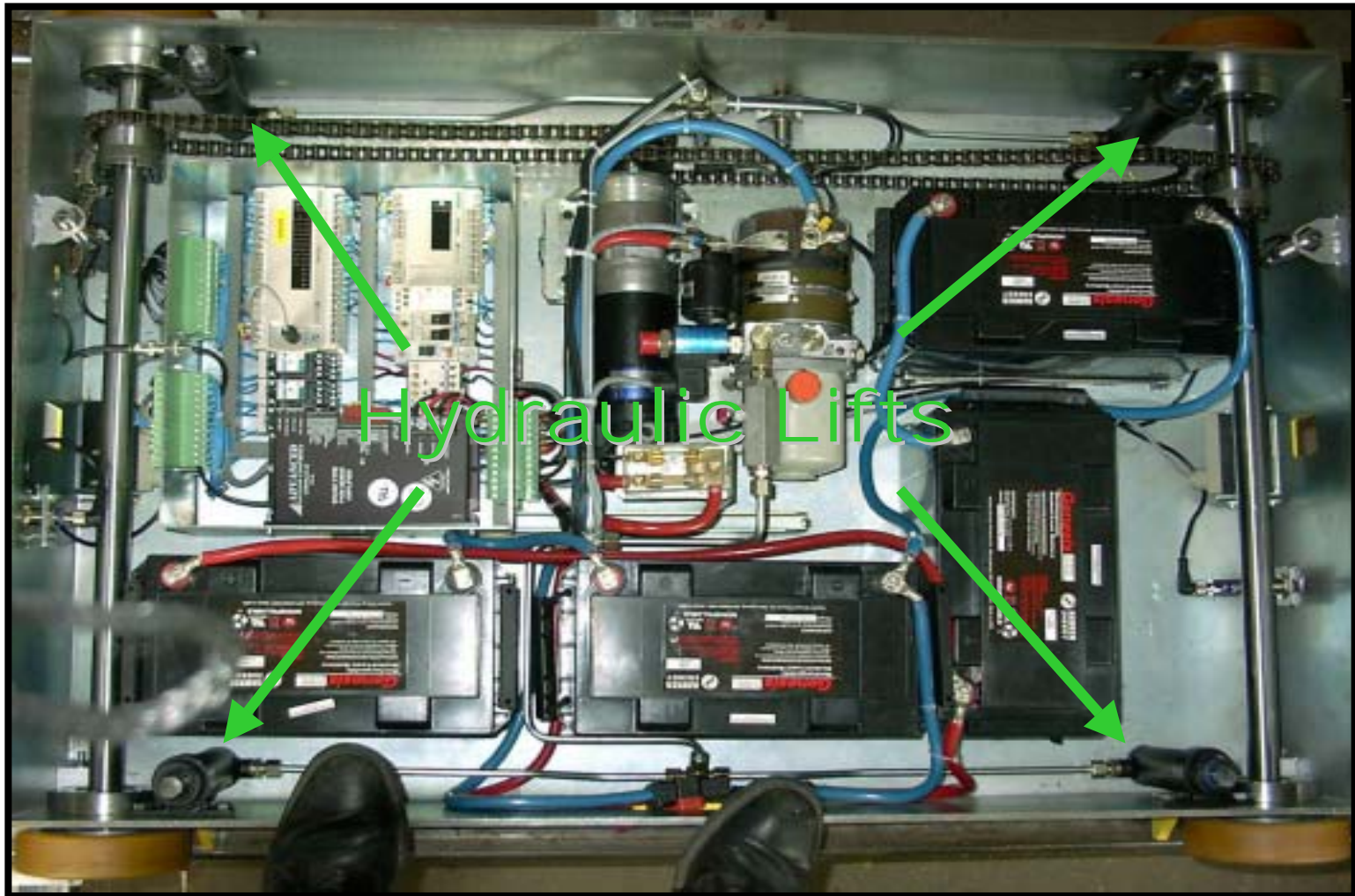
Interior Components



Hydraulic System

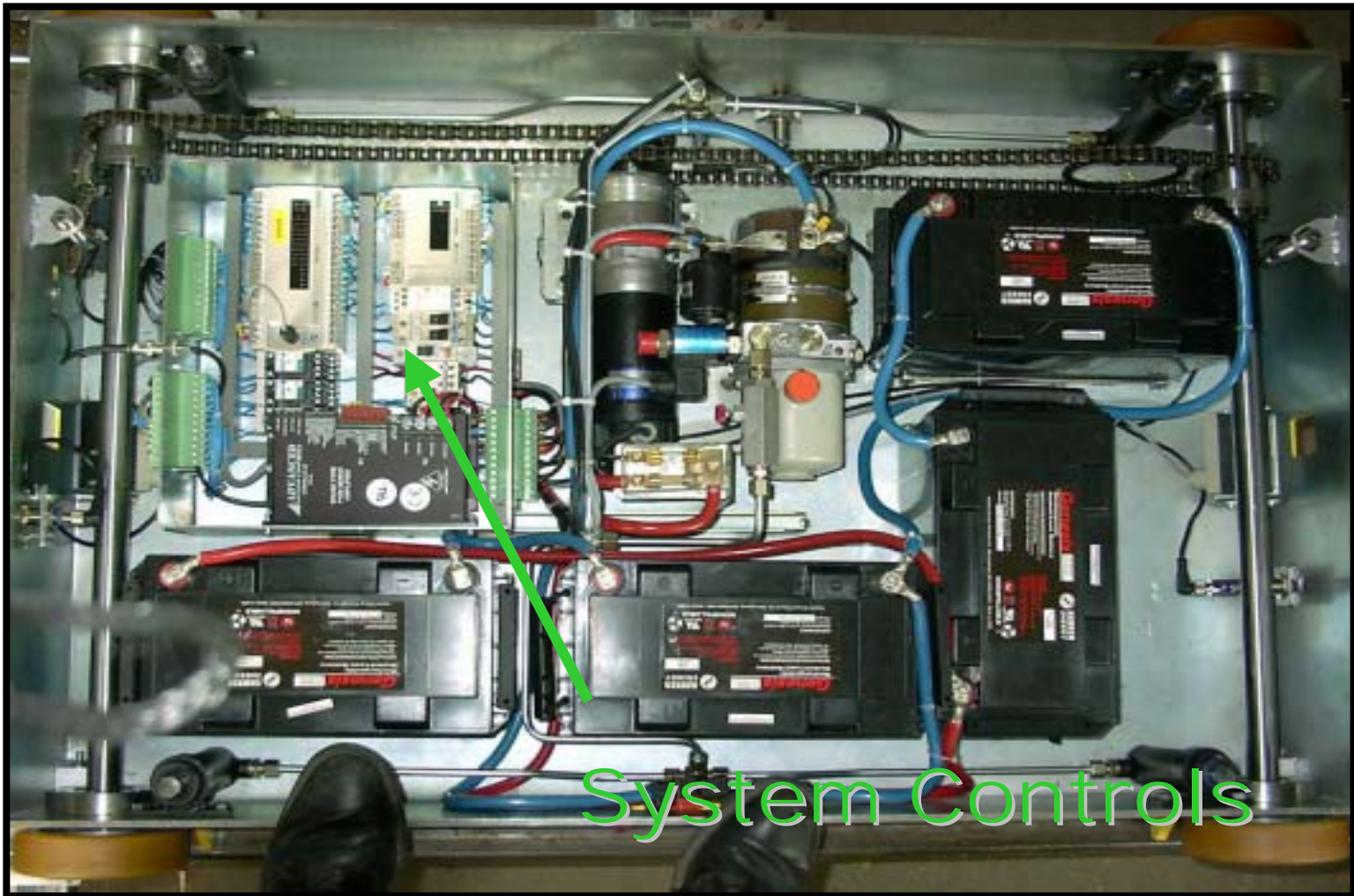


Interior Components





Interior Components



System Controls



Benefits

- No need for expensive special trucks
- Excellent for facilities with high turnover rate
- High degree of utilization of building
- Handling time is halved vs. Drive-in
- High degree of accessibility – Lanes above or below can be different products



Site Photos

SymoSat®







SymoSat®





SymoSat®



SymoSat®





High Density Storage System Comparison



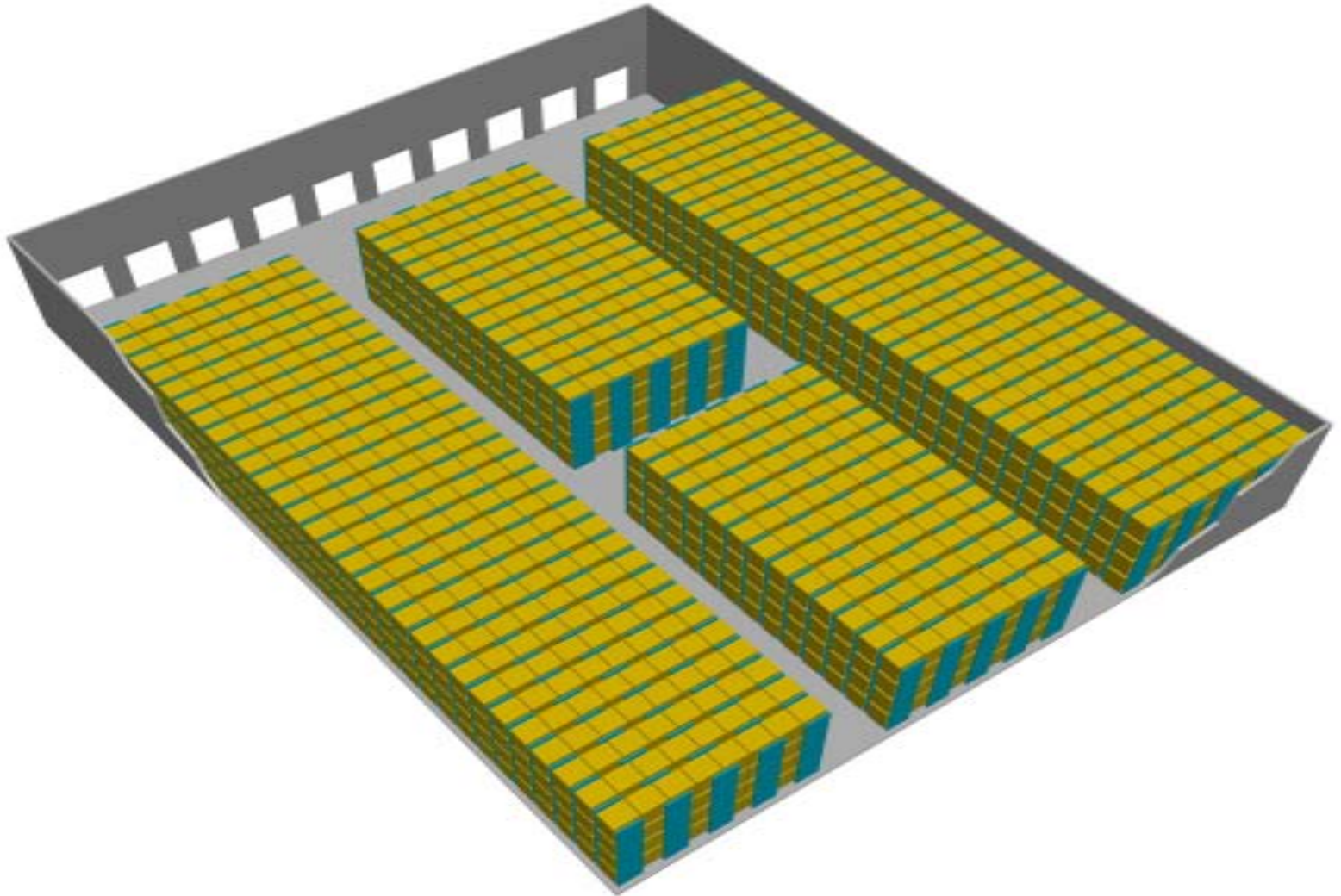
Total Cost of Ownership

Comparing the *Total Cost of Ownership* for operating a 2,600 Pallet Position Distribution Centre using:

- ◆ Drive-in Racking
- ◆ Pushback Racking
- ◆ Pallet Flow Racking
- ◆ Pallet Runner™

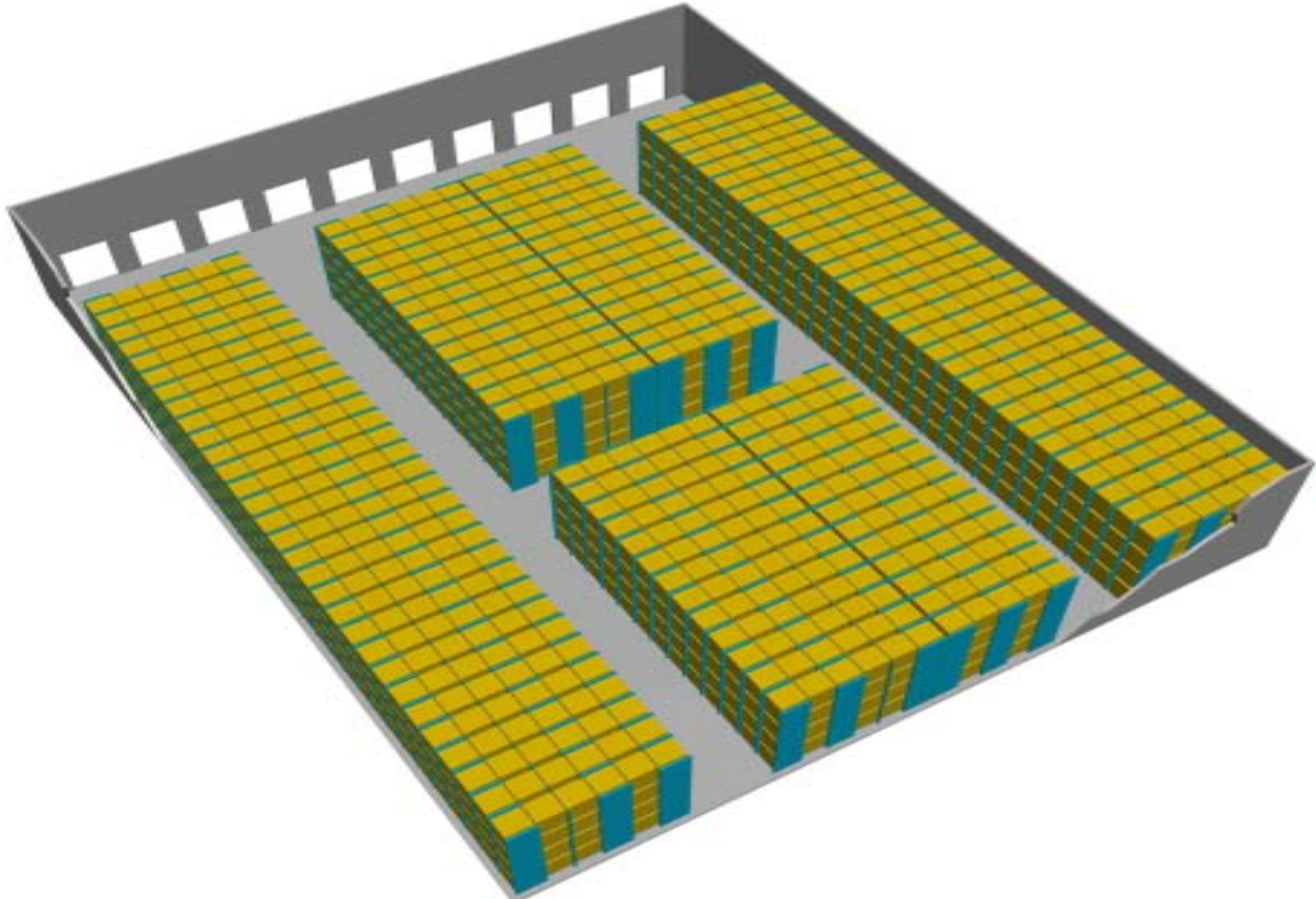


9 Deep Drive-in



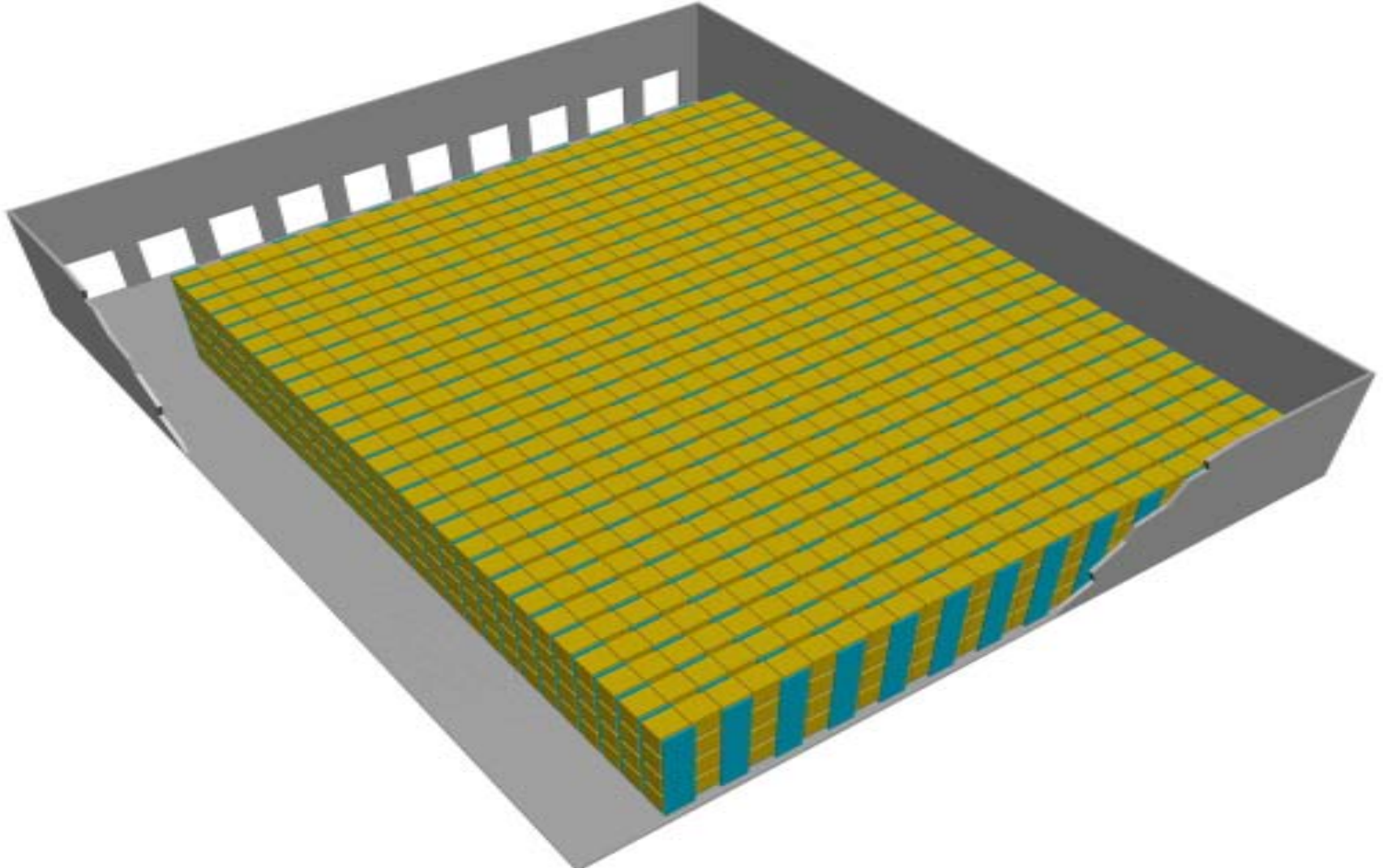


5 and 6 Deep Pushback



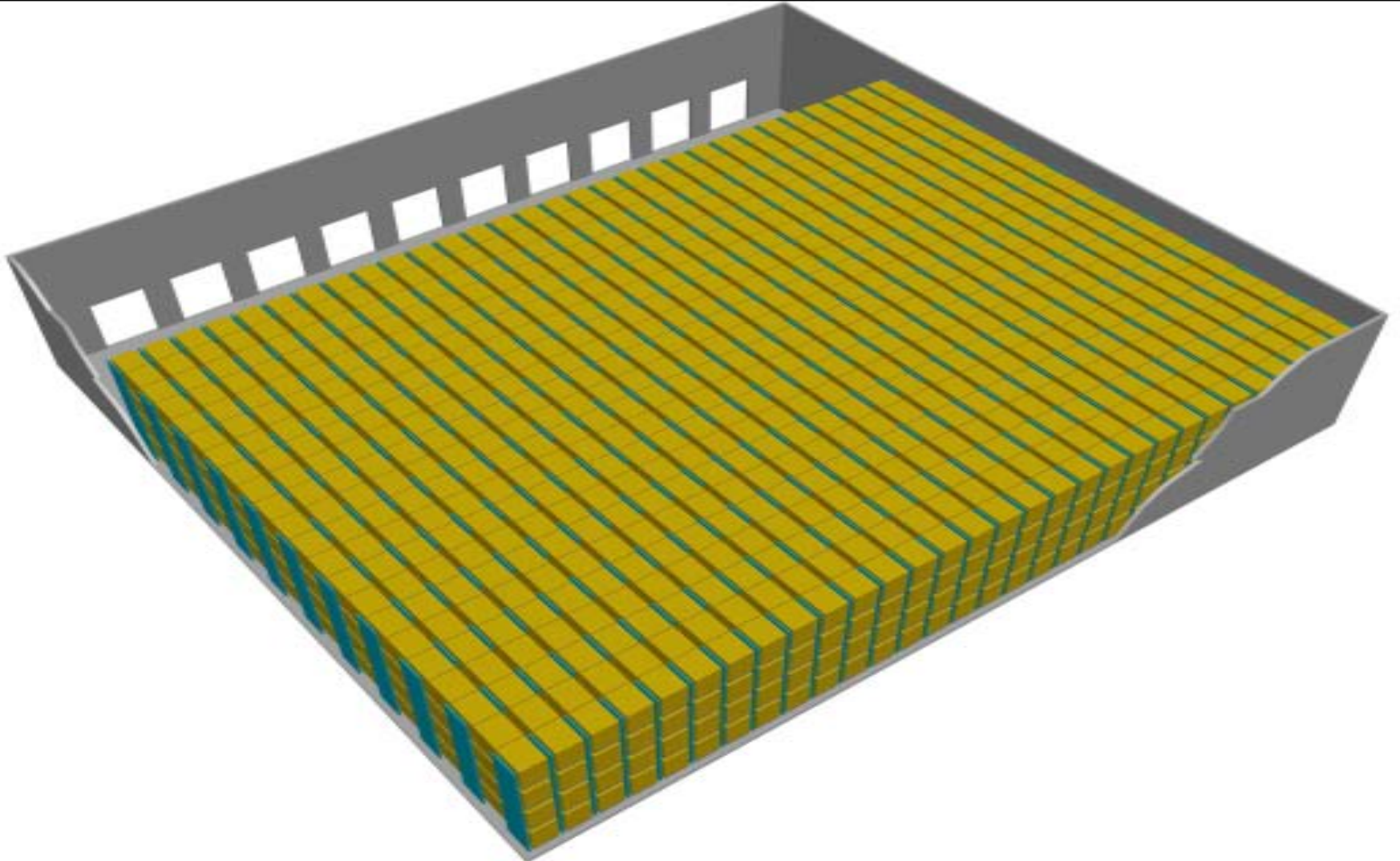


25 Deep Pallet Flow





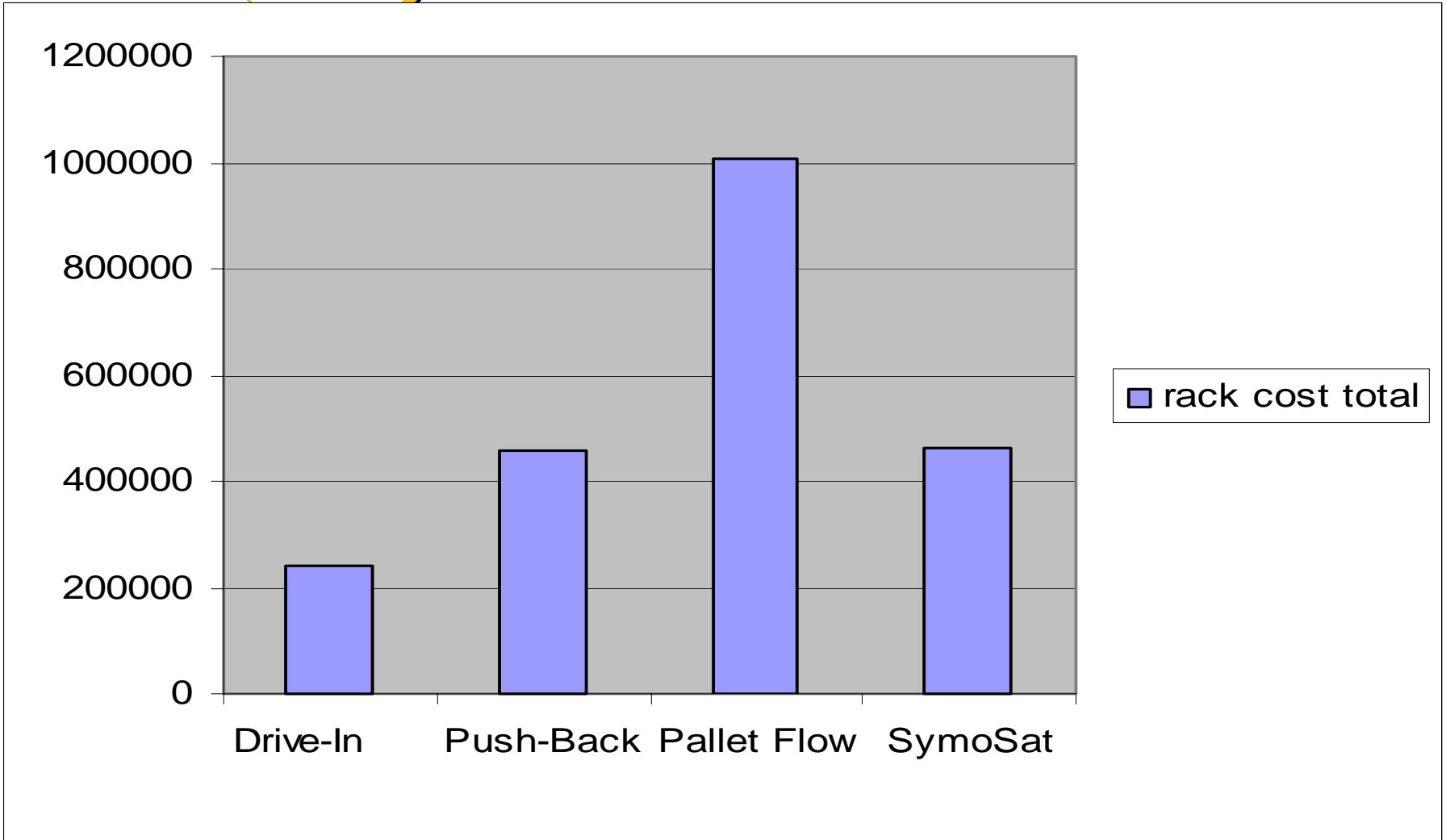
21 Deep SymoSat HDS System





RACK COSTS

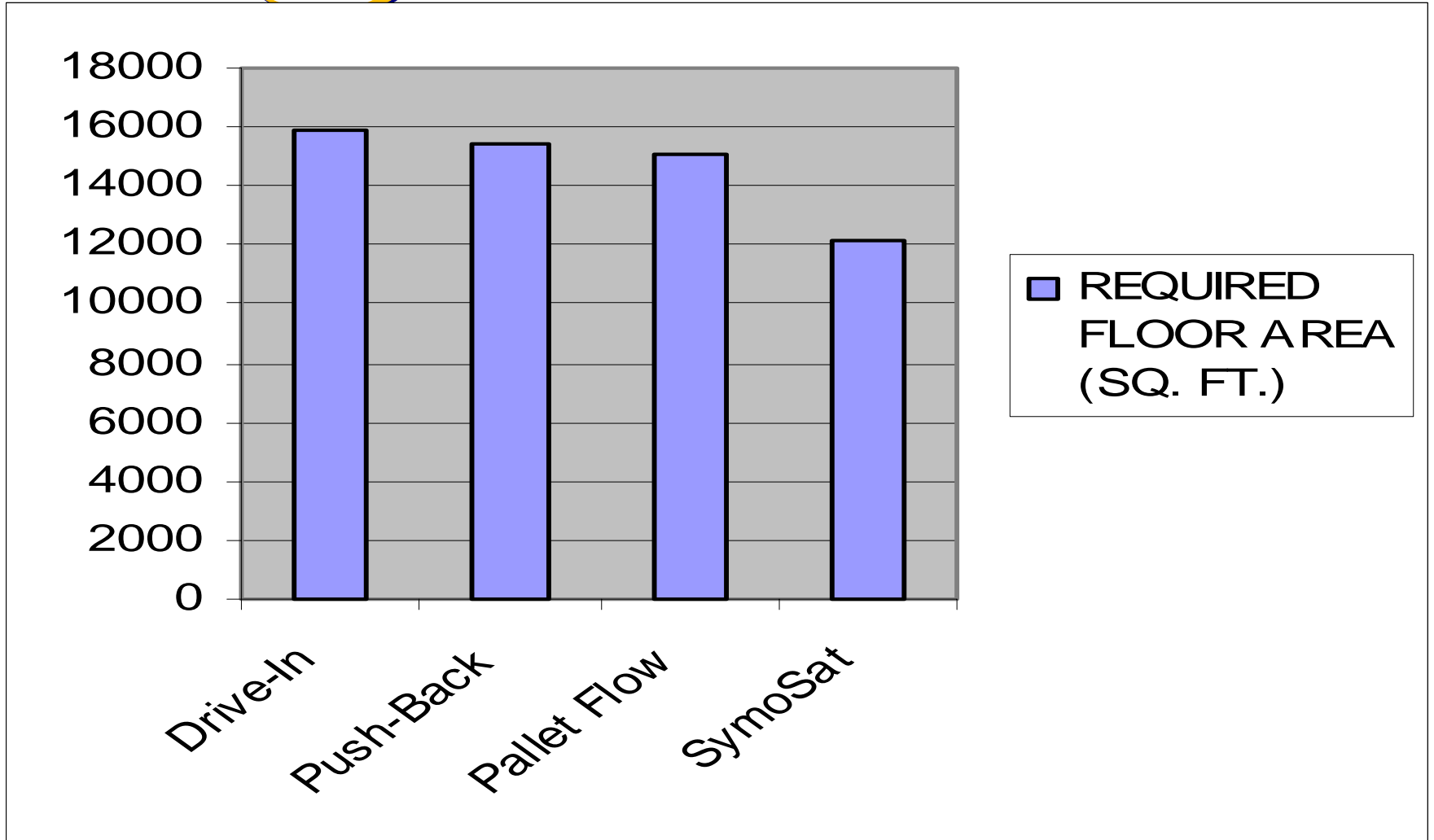
SymoSat HDS vs. other HD





REQUIRED FLOOR AREA

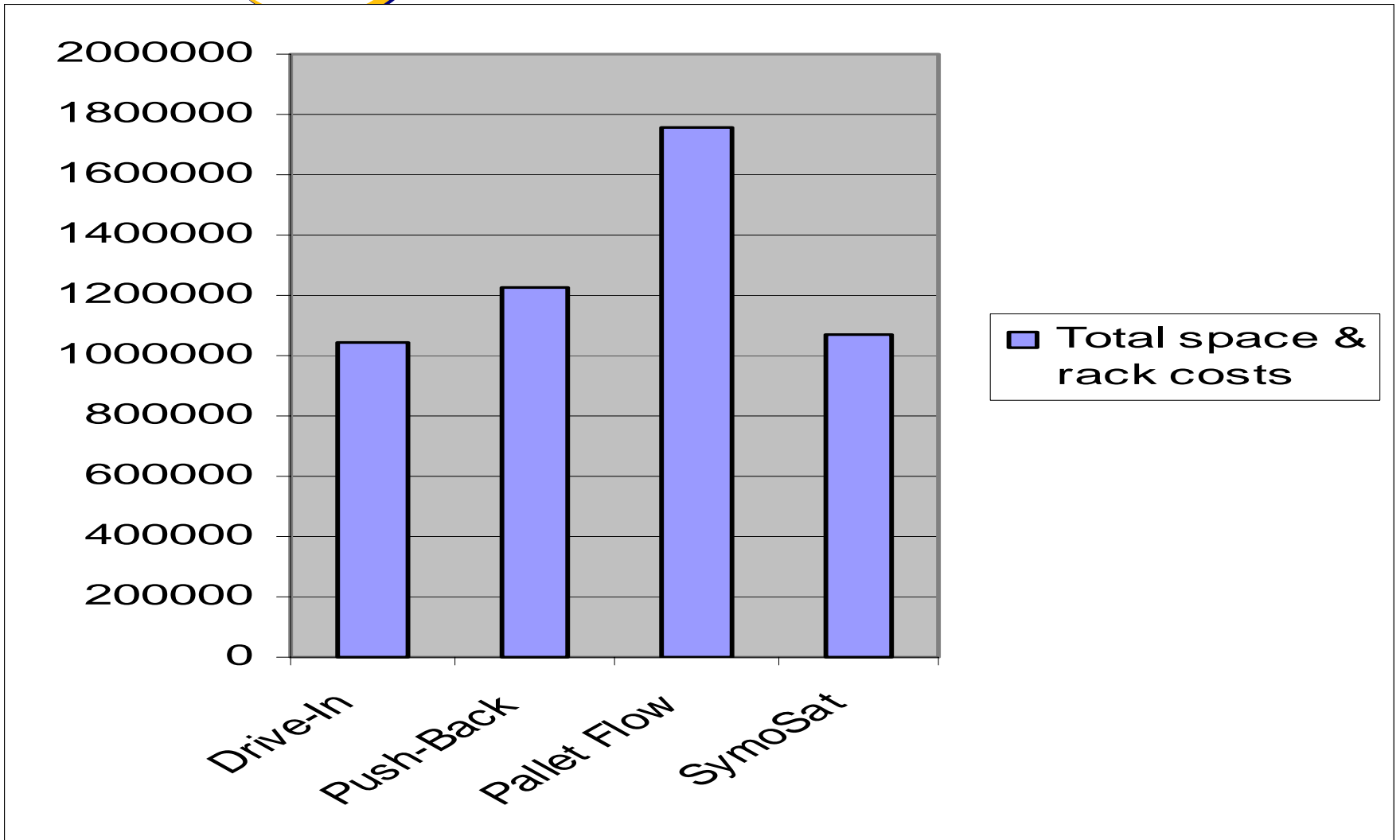
SymoSat HDS vs. other HD systems





SPACE + RACK COSTS

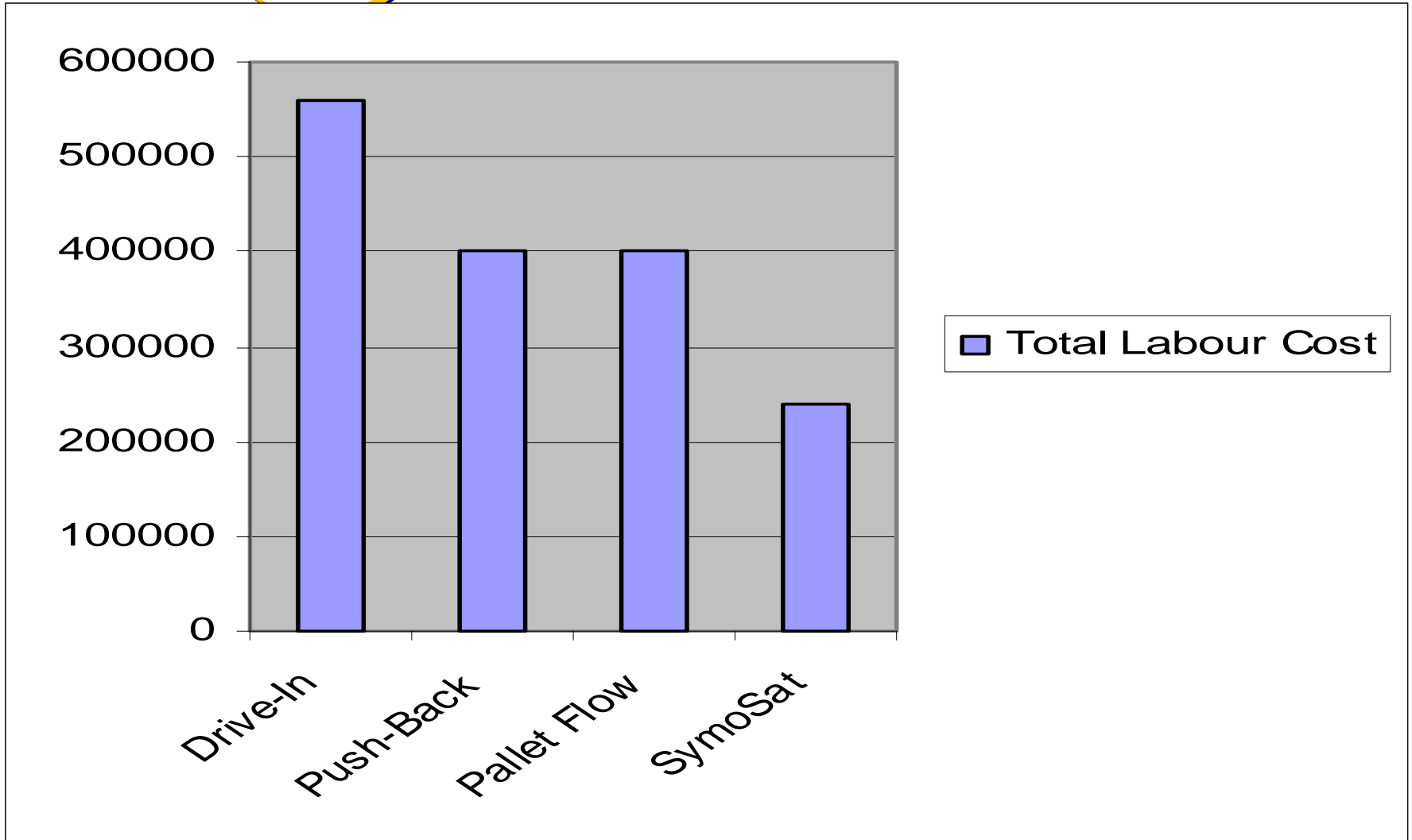
SymoSat HDS VS. Other HD systems





LABOUR COSTS

SymoSat HDS VS. other HD systems

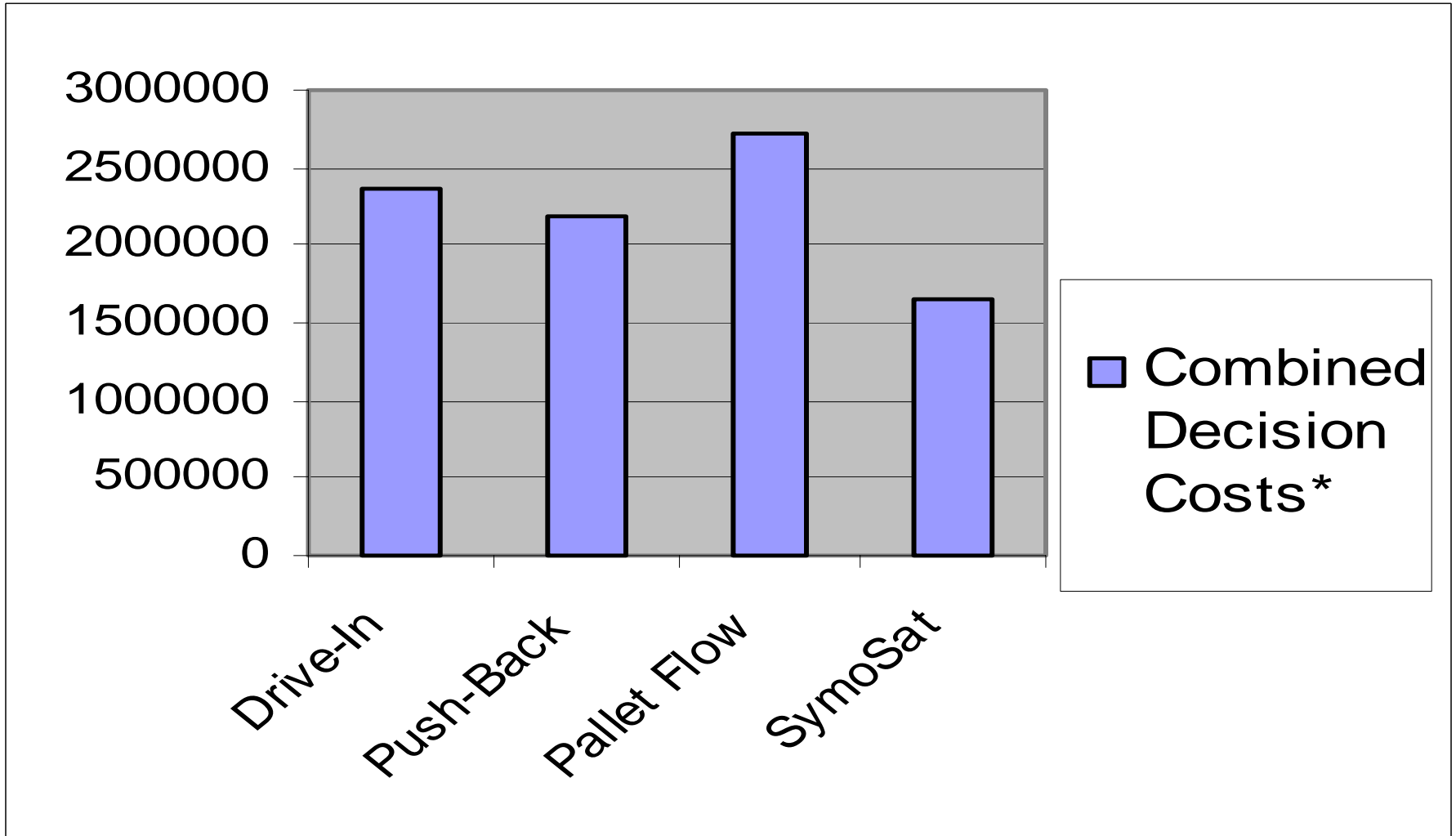




DECISION COSTS

SymoSat HDS VS. other HD systems

Capital for space, trucks racks + 2 years labor





Thank-you!