

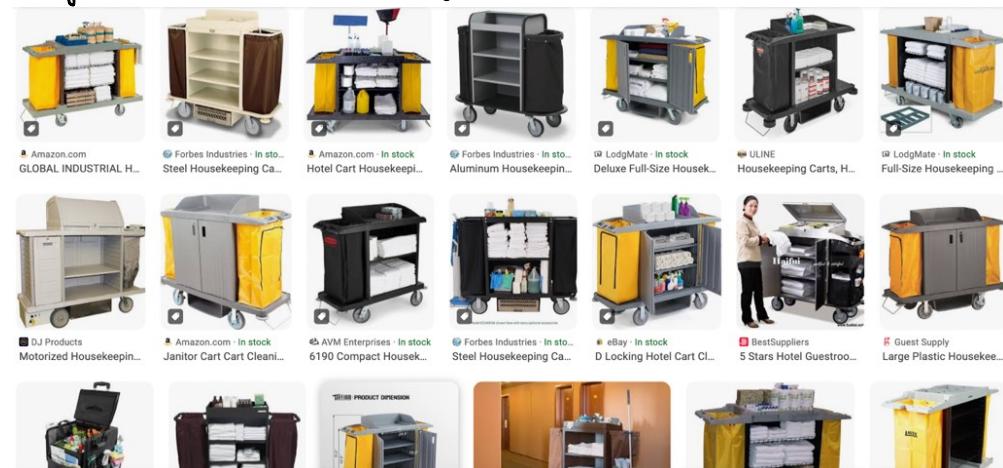
# What's Out There?

Google search for "hotel carts"

Luggage Cart - Bellman, Bra... \$765.00 ULINE	Vinyl Basket Truck - 20... \$360.00 ULINE	Laundry Carts - Canvas... \$375.00 ULINE	Luggage Cart - Narrow ... \$745.00 ULINE	Luggage Cart - Bellman, Silv... \$765.00 ULINE	Stainless Steel Service Cart -... \$265.00 ULINE	Canvas Basket Truck - 12 Bushel - ULINE - H-1581 \$265.00 ULINE	Plastic Platform Tru... \$365.00 ULINE	Rubbermaid Housekeepin... \$1,050.00 ULINE



Google search for "housekeeping cart"

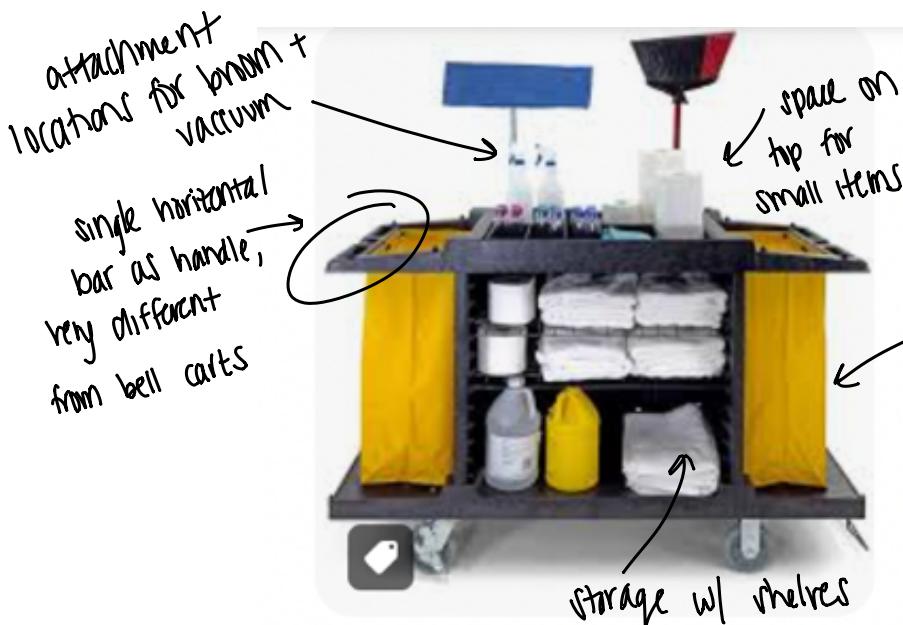


we saw while we were there - could be cool to make something that works for both laundry + housekeeping carts

Observation: most bell carts have vertical handlebars (don't have to worry abt height of handle anymore or make it adjustable for various heights)

do ppl place their hands @ diff angles for push v.s. pull?

↳ All/most seem to follow a very similar format/organizational structure that our design should make sure not to modify (so we don't mess w/ muscle memory)



↳ do they have different purposes?

## Action

### T3 & T3XL robots for hotel housekeeping carts



robot automatically locates housekeeping cart + drives itself under, attaches, + moves cart wherever using navigation system

- 1000 lbs carrying capacity
- 12 hr charge time
- comes w/ a base that can be attached to any cart to make it compatible
- travels on ramps + flat surfaces

Reminded me of hospital carts



Google search of "hospital cart"



Need ability to lock the wheels of cart

Diff types of handles, shorter carts.

Carry sensitive materials - privacy + security are very important

what are the values of a hotel + how can we make sure our design embodies these values?

- Safety
- Cleanliness
- Welcoming
- Responsive

Adjustability is very important

- Adjustable monitor
- Footrest
- Adjustable keyboard tray + cart height
- Compartments for accessories + sensitive items



standing carts



how do we ensure our system is compatible w/ various carts?

explore diff types of surfaces

- uphill / downhill
- carpet / tile / flooring
- etc.

## Problem Spots + Additional Info

- Looked through housekeeping reddit discussions
  - ↳ Issues w/ storing vacuums, nowhere to attach them to the carts
  - ↳ Issues w/ security - guests stealing from carts or other housekeepers stealing from stocked carts
    - Most of the time, housekeepers restock their own carts @ the end of their shift
  - ↳ Difficult to maneuver carts through tight spaces (e.g. elevators)
    - + hard to turn cart easily
  - ↳ Need better security for cart for personal items
- Must minimize trips from cart ↔ room
  - ↳ Hand caddy often kept on cart that they bring into room w/ them
  - ↳ Try to do things in the same order every time to maximize speed over time