

A photograph of an elevator entrance. The elevator doors are closed and have a brushed metal finish. To the left of the doors is a small red sign with white text. To the right is a control panel with a digital display, several buttons, and a red fire safety sign. The surrounding wall is a light beige color with horizontal paneling. The floor is made of light-colored square tiles.

ELEVATORS

A Case of Open & Shut

Overview

For city-dwellers, **elevators are a big part of our lives**. In Manhattan alone, **1.6 million people¹** live in nearly 850,000 units,²- many of which are in buildings with elevators.



Sources:

- 1 2010 US Census
- 2 2011 NYC Housing Vacancy Survey <http://www.nyc.gov/html/hpd/html/pr2012/pr-02-10-12.shtml>

Overview

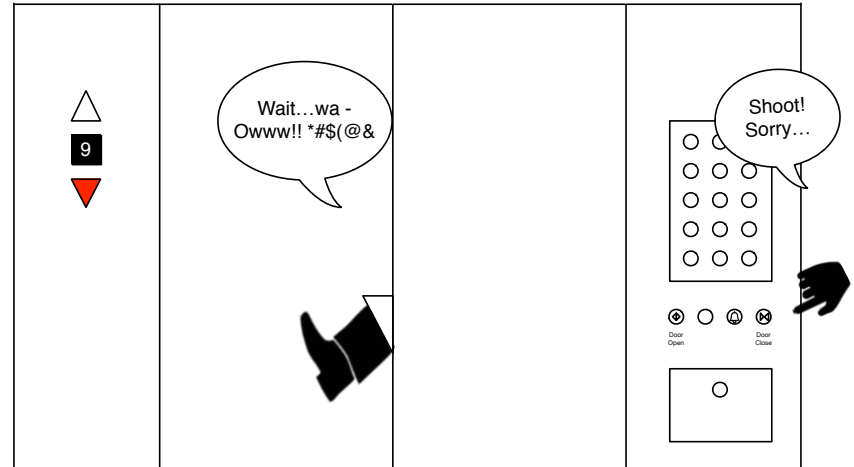
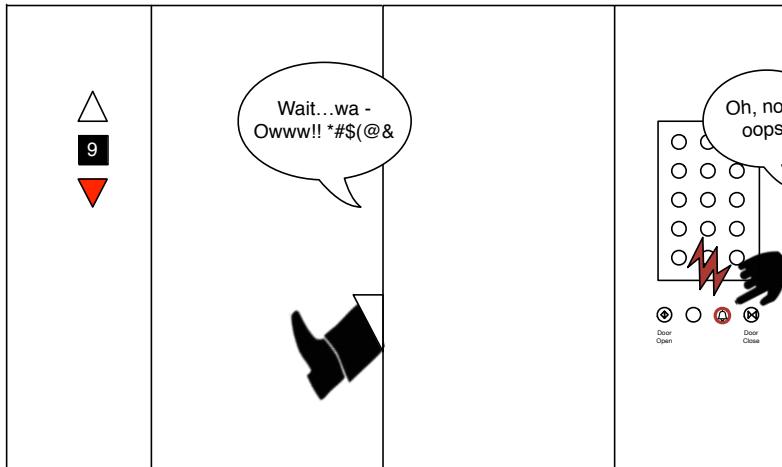
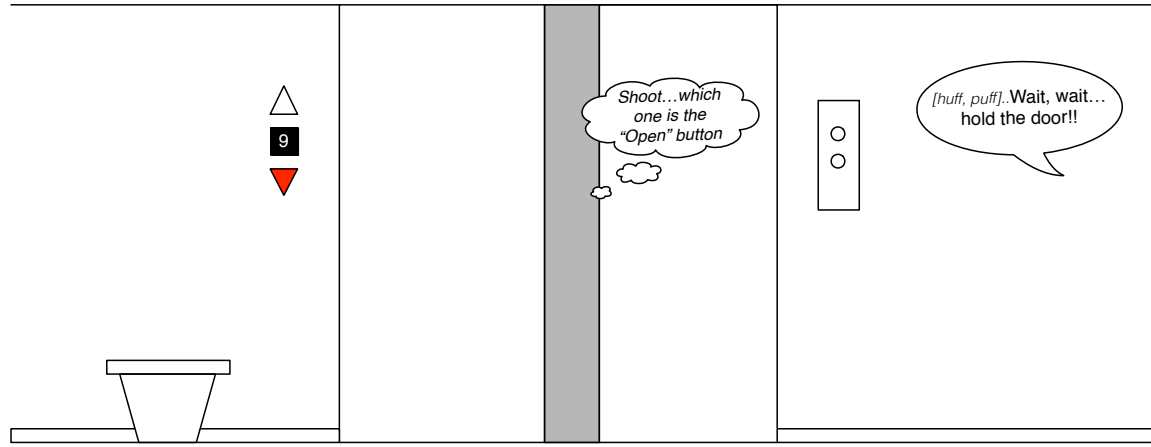
Between going to work and going home, **residents of large cities probably ride in elevators 8+ times per day**. That's a lot of time!

Here's the issue – many elevators take little time to close, so **why is it so difficult to hold open an elevator door for someone?**

The mother rolling her baby carriage, the elderly man with a walker, the guy from down the hall carrying a box for UPS.....

.....you get the picture.

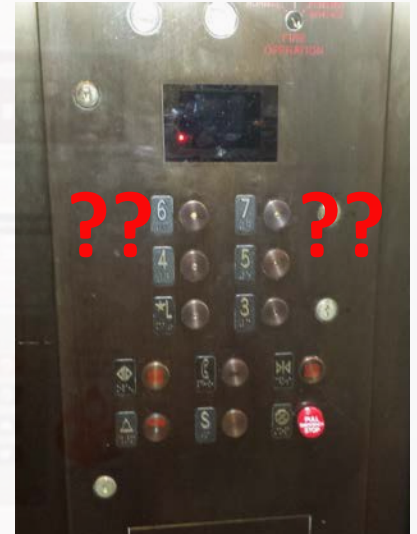
This is what happens



False alarms, broken limbs, missed appointments...

Too common ... why??

Can you locate the "Open" or "Close" buttons on any of these elevators?

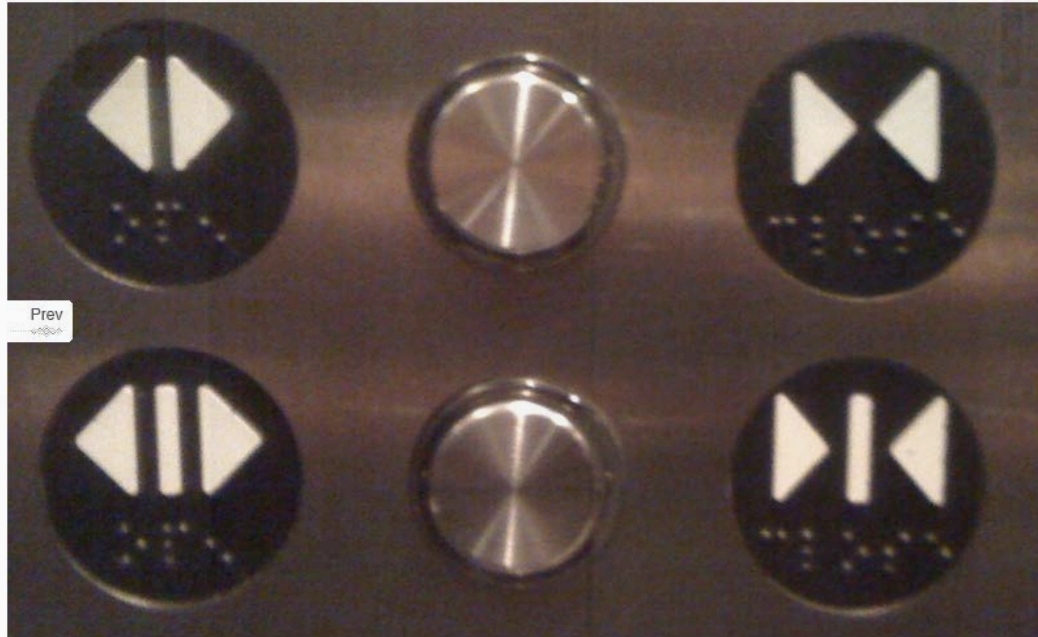


Oh, wait
- there
it is!!
→



Too common ... why??

Here's an example close up -



Reasons

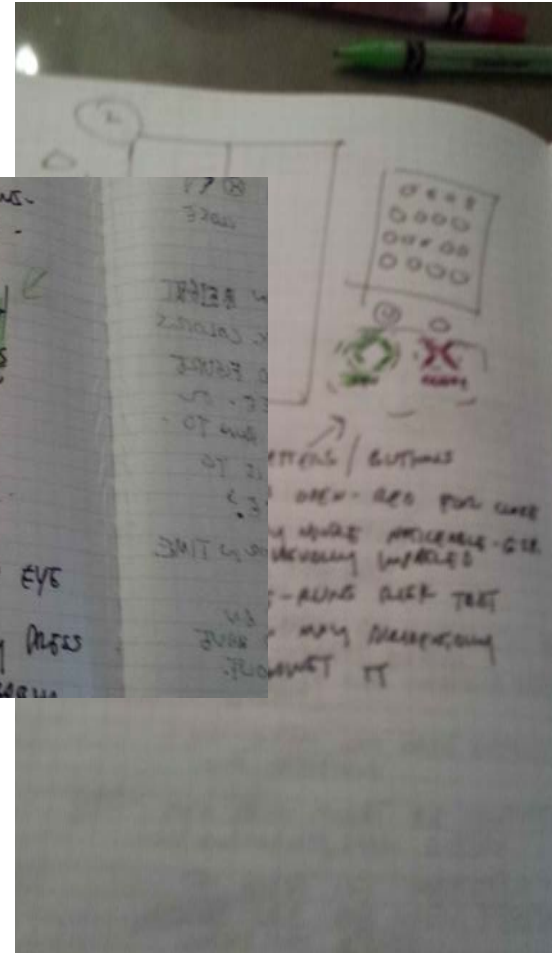
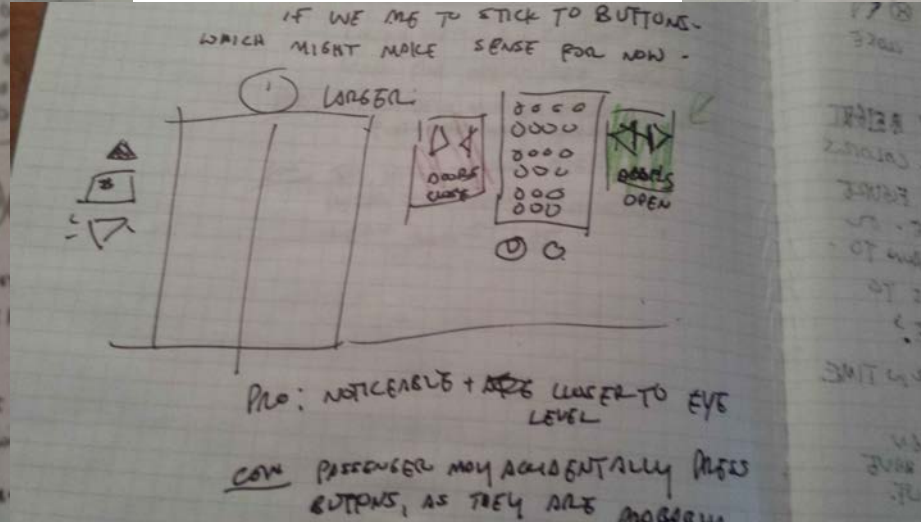
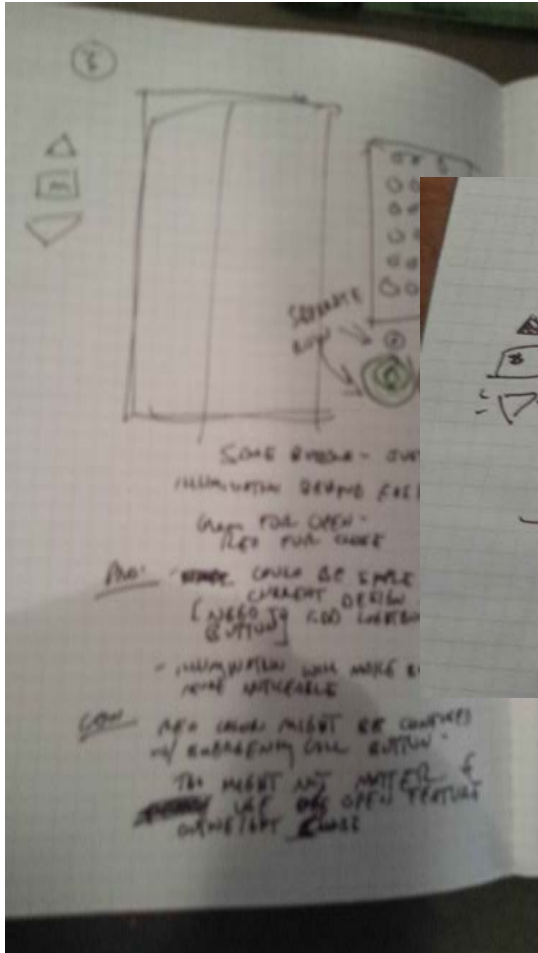
I researched **some key facts** –

- The modern elevator invented in 1850
- The largest 4 companies have 90% market share in the US¹
 - Fewer companies means **less competition**, suggesting there is **a lower incentive for design innovation**.
- Industry group has **established design standard**; however **focus is around safety** and access for those with physical disabilities, i.e. wheelchair access, braille.²

¹ http://elevation.wikia.com/wiki/List_of_elevator_and_escalator_companies

² ASME A17.1/CSA B44-2007

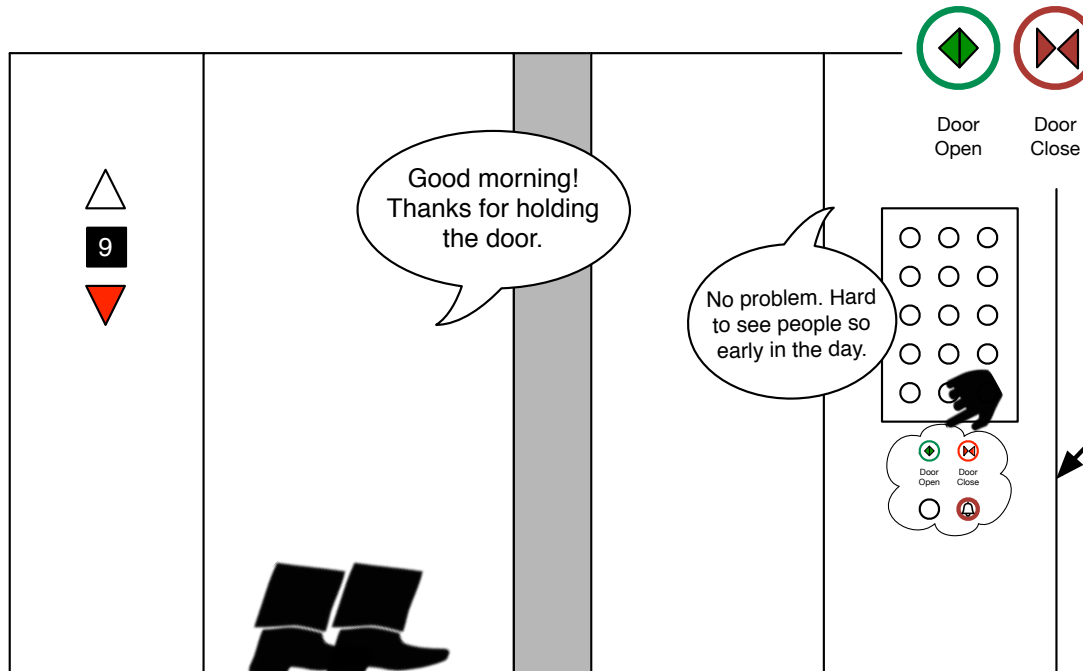
I sketched out design ideas



...and wireframed solutions

Solution #1:

- Assign an illuminated colored light behind each button
- Place open/close buttons on a separate rows

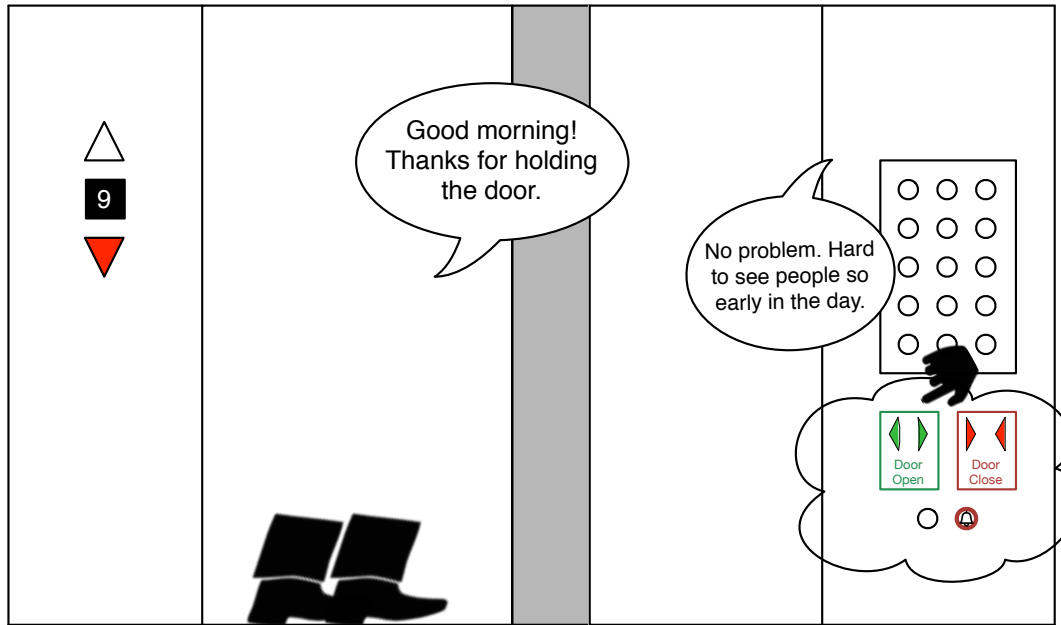


Pros Simple fix? (place light bulb behind button)

Con: Red color may be confused with emergency call button

Wireframed solution

Solution #2: Larger letters & buttons illuminated in red and green

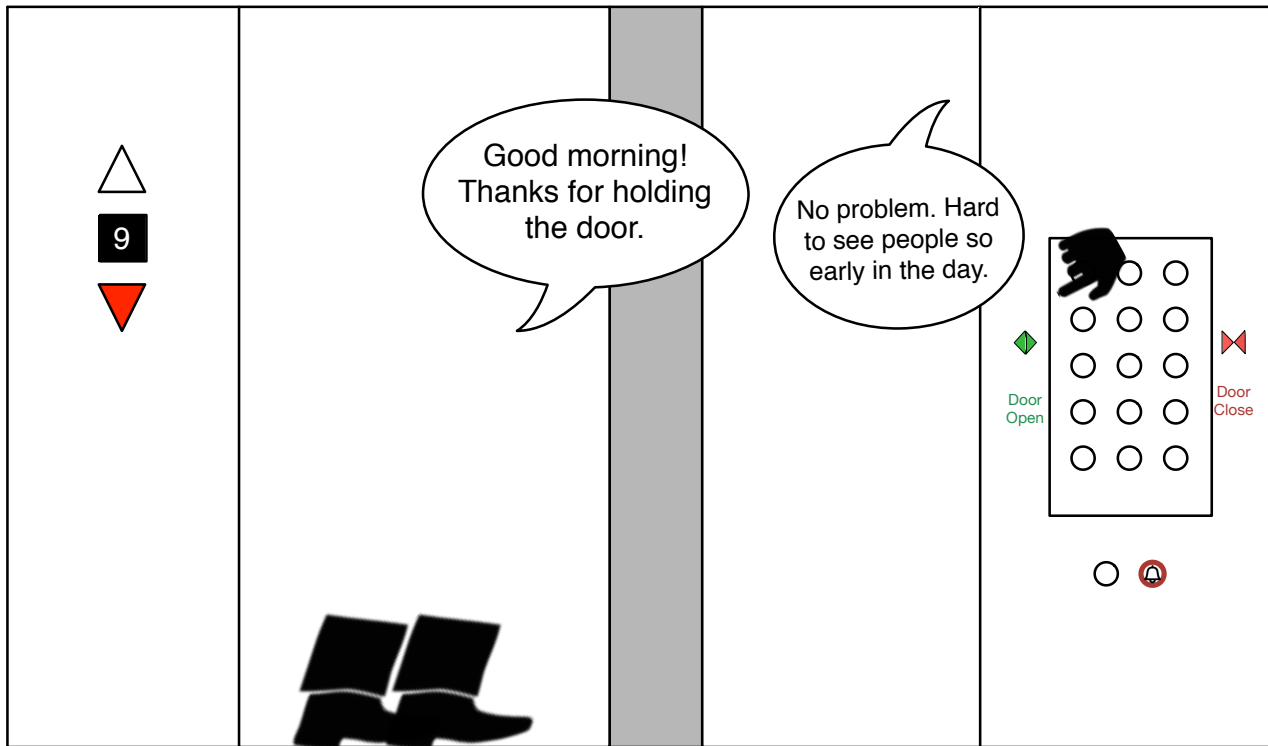


Cons:

- Passenger may accidentally lean against button
- Large button size may not be aesthetically pleasing

Wireframed solution

Solution #3: Buttons illuminated on each side of panel

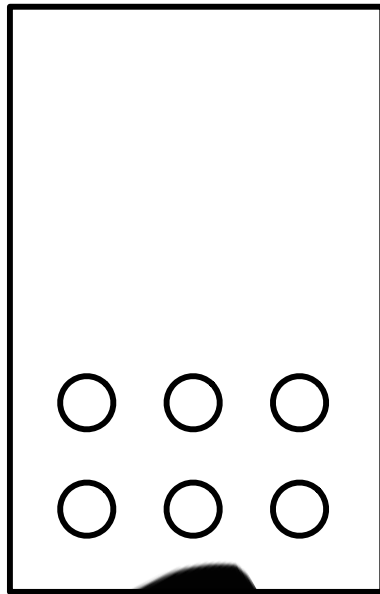


Cons:

- Placement may not be apparent, as passengers are used to looking below panels for floor buttons.
- Some passengers may not be able to reach buttons.
- Passengers may accidentally lean on the buttons

Wireframed solution

Solution #4: Get rid of the “Close” button



Pro: Less confusion, assuming people have more of a need to hold the elevator door open than close.

Con: Passengers may want the option of closing the elevator door sooner than usual time programmed for that elevator.



Door
Open



Emergency

Conclusion

Little can be done to change competition in the elevator industry. As long as **design changes meet industry safety standards**, a **simple change** of button shape, color or location could **make a difference** to millions of people.

Really.

