

Name(s):

Activity 3: User Centered Design

This activity is intended to get you thinking about the user-centered design process, by conducting a very lightweight UCD process on the designing of the bus routes for the campus.



1. Planning bus routes for the campus

The first problem we'd like to solve: where should we route the buses across the campus and install bus stops? Recall that UCD has three parts.

Early focus on users and tasks. Who are the users? What are their tasks? What requirements does the system have?

- **Users:** Riders and bus drivers
- **Tasks:** Riders need to get to a destination. Bus drivers need to pick up and drop off riders.
- **Requirements:** Riders should be able to walk to the nearest bus stops within 5 minutes. Bus drivers should be able to drive on the planned routes and pull into designated bus stops.

Iterative design with prototypes. How can we build prototypes of bus stops, so that we can explore the design space before actually running buses across the campus?

- Map, simulation, poles

Empirical evaluation throughout the iterative process. How can we evaluate the prototype to provide data and insight for the next iteration?

- **Quantitative:** What is the average amount of time for a typical rider to walk to the nearest bus stop?
- **Qualitative:** How safe is the location for the bus stop as perceived by riders?

2. When is the next bus coming?

Suppose we have discovered that riders are often frustrated by not knowing when the next bus is coming. They can't decide whether to wait or just walk to the destination. Now it's your turn to fix this problem by UCD.

Early focus on users and tasks. Who are the users? What are their tasks? What requirements does the system have? (Focus just on this narrow problem for now, not on everything related to buses.)

Name(s):

Iterative design with prototypes. Suppose we'd like to solve this problem by installing a LCD monitor displaying the map and the current location of all the buses. Imagine a few ways this solution could be prototyped.

Empirical evaluation throughout the process. Evaluate your prototype. What can you measure qualitatively and quantitatively in order to evaluate the effectiveness of the prototype?

Qualitative evaluation:

Quantitative evaluation: