How can the system (or information) best support the users and their tasks?

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Usability Through User-Centered Design

Personas

User feedback

Interview notes

Flow charts

Stakeholder goals

Scenarios

Survey results

Requirements
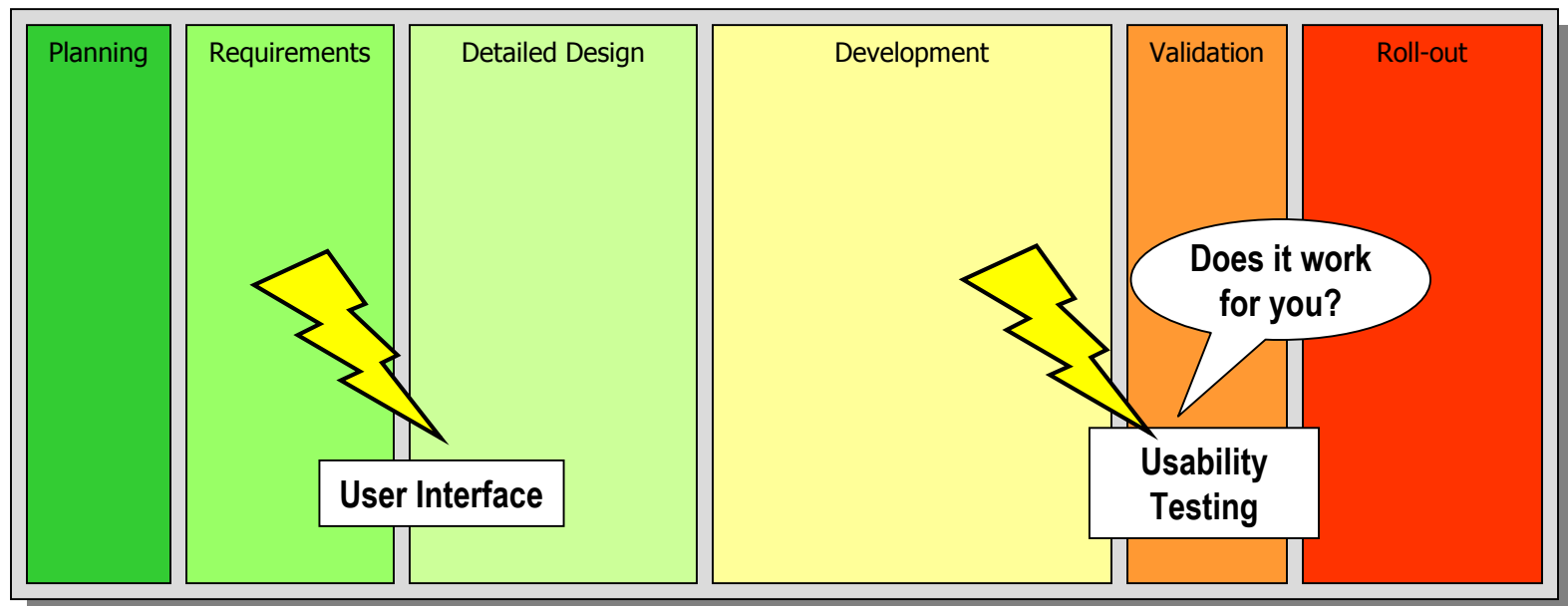
Usage statistics

Problem reports

Use cases

... "and then the magic happens" ...
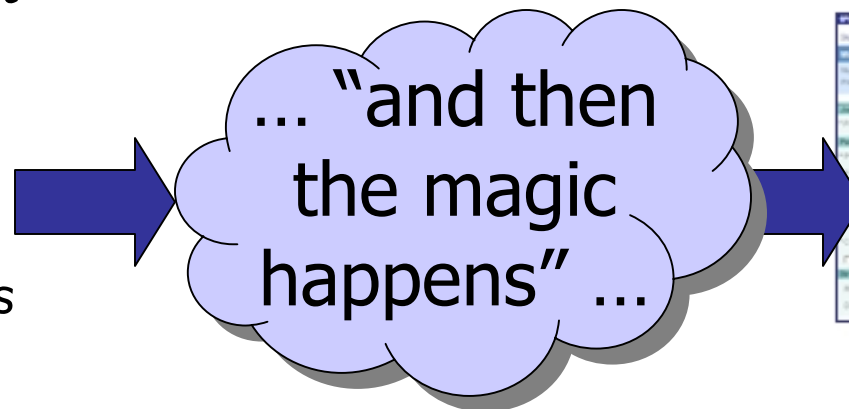
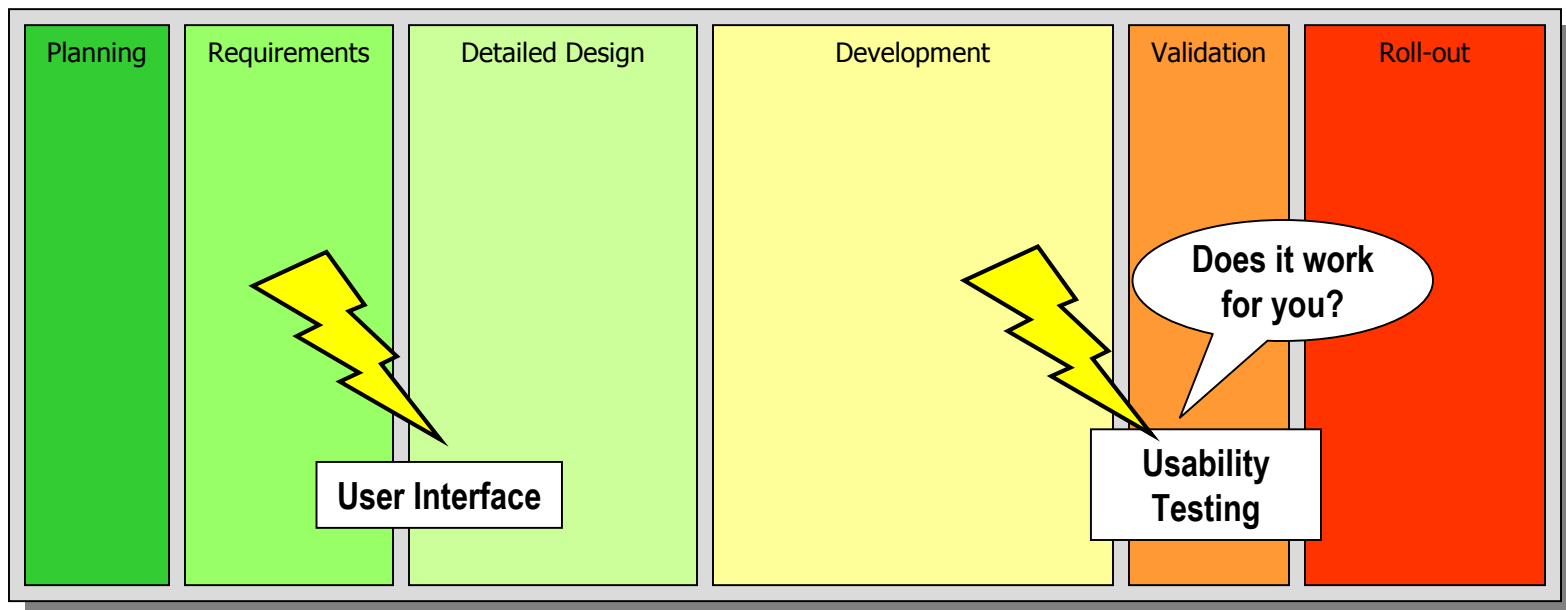# Designing for Usability

The Old Way

Decisions about the user interface occurred separate from usability testing. The usability test often identified major problems too late to fix them.

Planning	Requirements	Detailed Design	Development	Validation	Roll-out

User Interface

Usability Testing

Does it work for you?

Designing for Usability

The Old Way is replaced by ....

Planning	Requirements	Detailed Design	Development	Validation	Roll-out

User Interface
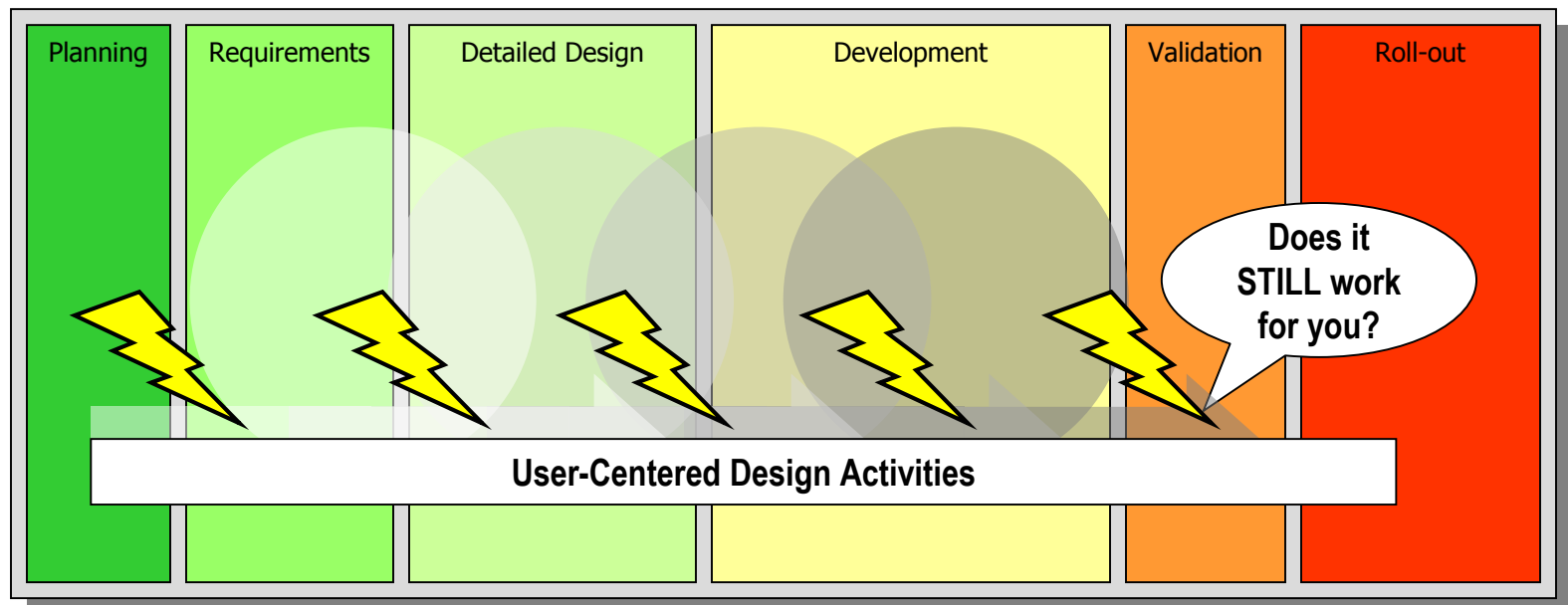
Does it work for you?

Usability Testing

Designing for Usability

The New Way

UCD activities, including prototyping and evaluation, occur iteratively throughout the lifecycle. The final usability test is for verification.

Usability Through User-Centered Design

Figure out what the real needs are

- Define the business need or problem and establish goals
- Gather information on the end users, tasks, and environment

**Design a solution to meet the needs
(and make sure it works)**

- Iterate design through collaboration with end users and stakeholders
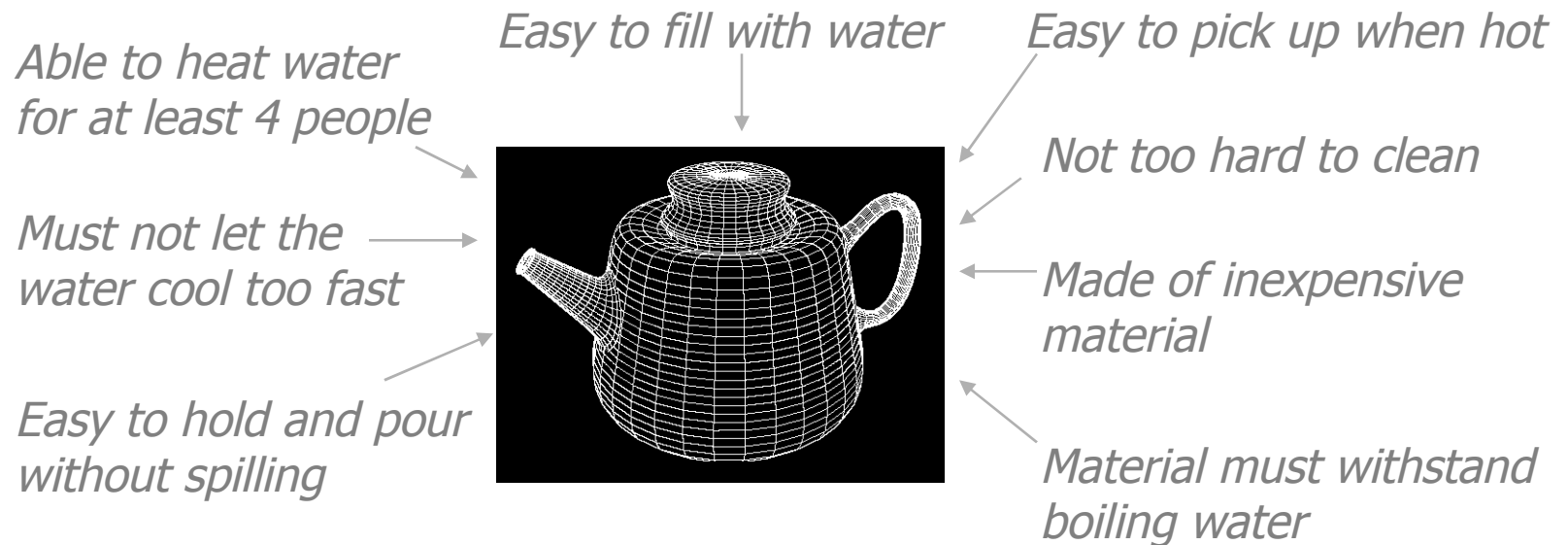- Test design early and often to make sure that needs have been met

Design is an essential step

What is Design?

- Creating the best form to fit the context

Able to heat water for at least 4 people

Must not let the water cool too fast

Easy to hold and pour without spilling

Easy to fill with water

Easy to pick up when hot

Not too hard to clean

Made of inexpensive material

Material must withstand boiling water

- Balance/tradeoffs to optimize the solution

- A mixture of art and science
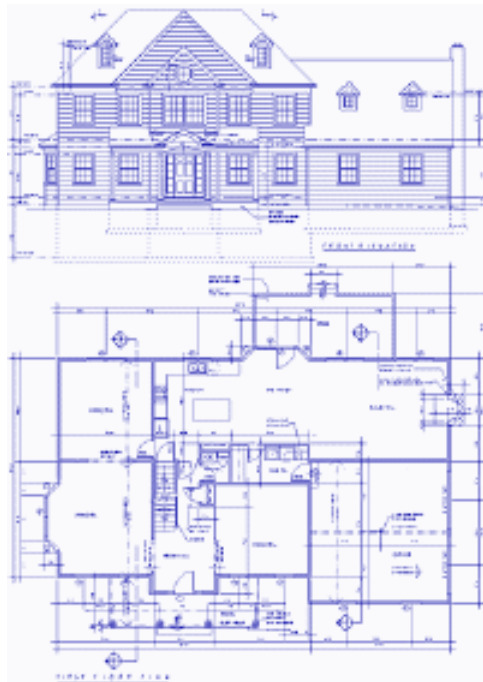
The Design Process

- A series of progressive transformations and refinements

Visioning

- "Blue sky" brainstorming sessions

- Fast, informal generation of ideas

- Creatively identify and solve problems

- Build a shared understanding of what is possible and desirable

Structuring and Organizing

What are we trying to build?

How should it be organized?

What are its main sections?

What will people do in each area?

Prepared by
L. Battle
10.28.2003

Abstract prototype

Structuring and Organizing

Task Information

User Action

System Action

Unresolved Questions or Issues

Representing and Refining
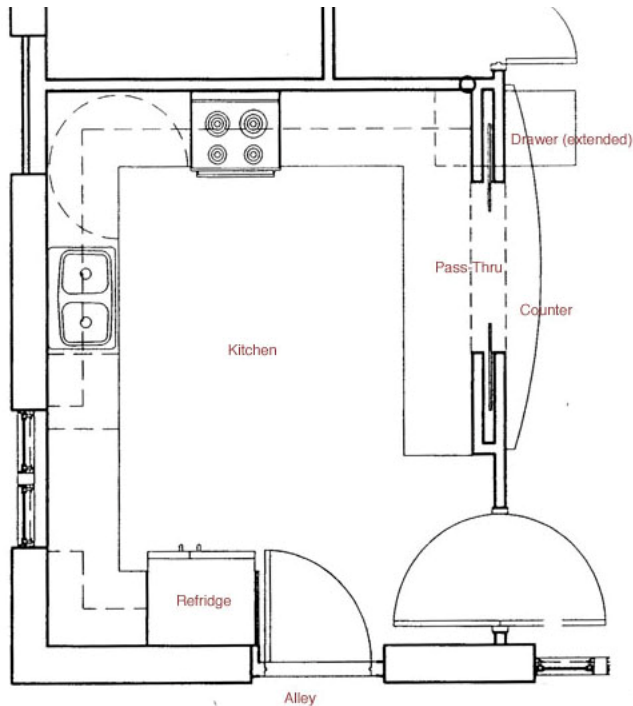
Which things should be near each other because they go together?

Is this the right style of interaction?

Does this layout support the flow of the task?
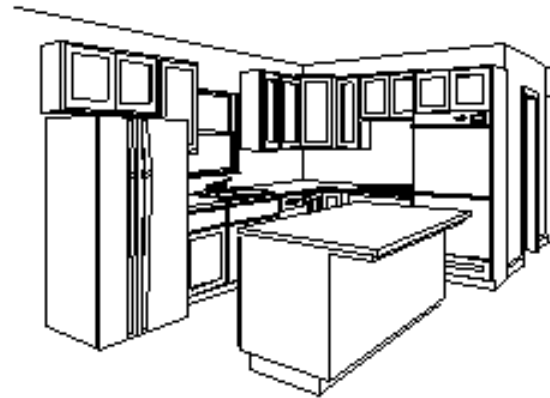
Representing and Refining

About Your Condition

List all of the illnesses, injuries or conditions:

1. [_____]   (Examples here)
2. [_____]
3. [_____]
4. [_____]
5. [_____]

When was the first time that this bothered you?   [Month ▼] [Day ▼] [Year ▼]

Have you gone to a doctor, hospital or clinic?   O Yes   O No

Have you had medical tests?   O Yes   O No

Do you take medicine?   O Yes   O No

[◄ Prior Page]   [Continue ►]

Paper prototype

Representing and Refining
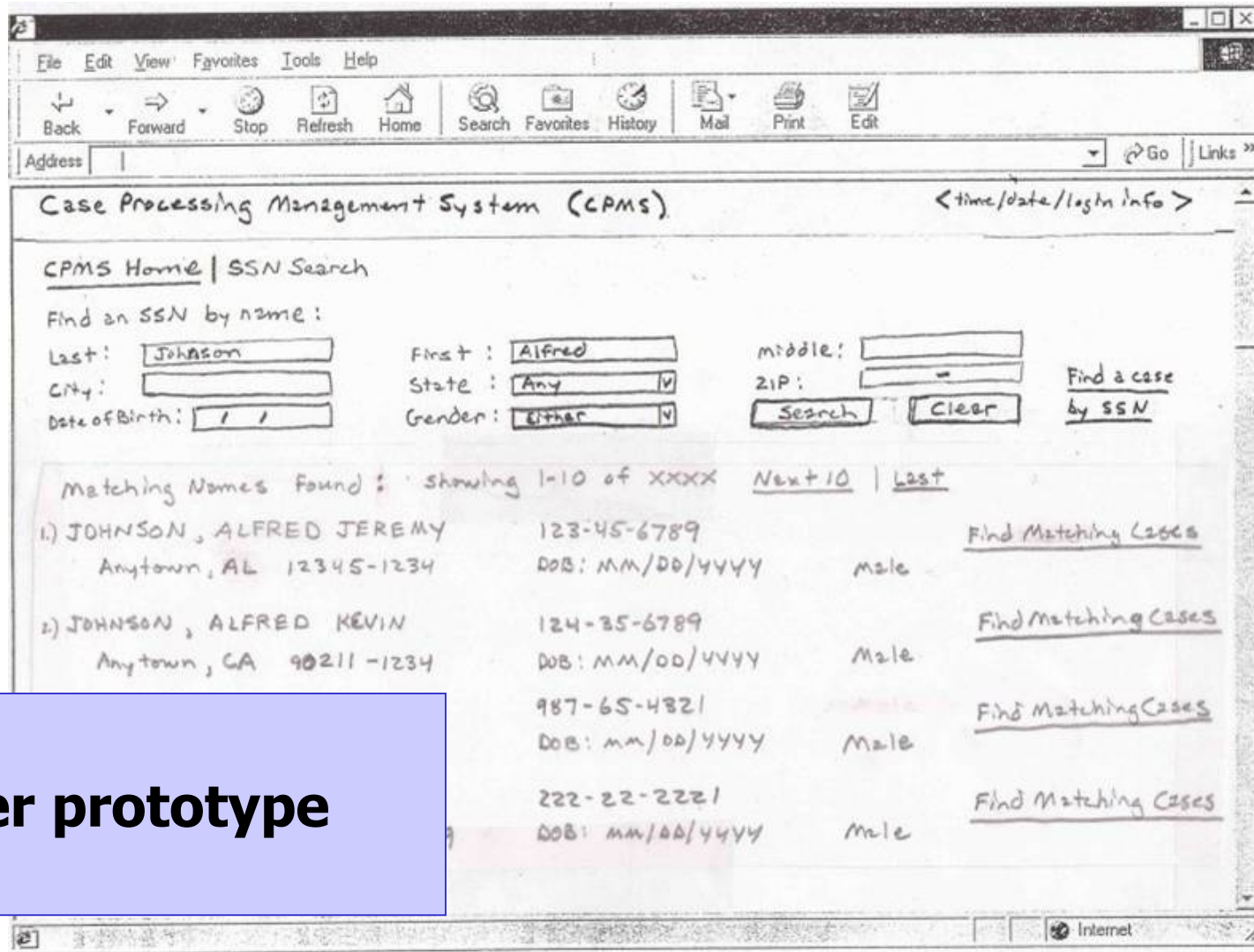
Paper prototype

Detailing and Polishing

What message do we want to convey through the visual appearance?

What do we want to emphasize?

How can the overall experience be enhanced?

Detailing and Polishing

Visual Design & Interaction Refinements

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Usability Through User-Centered Design

Detailing and Polishing

Visual Design

What it Takes

- Starting with a deep understanding of the users, tasks, and goals

- Small, multidisciplinary design team

- Comfort with ambiguity

- Time for iteration

- Access to users for iterative testing

- Management willingness to make design a conscious step, not an accidental one