User-Centered design in an Agile software development environment
What is User-Centered Design?

In UCD, all “development proceeds with the user as the center of focus.”

Jeffrey Rubin: Author of Handbook of Usability Testing

“User-Centered Design (UCD) is a user interface design process that focuses on usability goals, user characteristics, environment, tasks, and workflow in the design of an interface. The UCD process is an iterative process, where design and evaluation steps are built in from the first stage of projects, through implementation.”

Shawn Lawton Henry: Author of Accessibility in UCD process
Why conduct User-Centered Design?

UCD can improve the usability (ease-of-use) and usefulness (relevance) of everything from “everyday things” to software to information systems to processes … anything with which people interact.

Donald Norman: Author of The Design of Everyday Things

UCD seeks answers to:

- What is important to users
- The tasks users do, the frequency, and the order
- The users’ work environment
- The users’ current problems
- The users’ current and future constraints
- The users’ required output and format
How is User-Centered Design conducted?

- User analysis
- Task analysis
- User profiles
- Scenarios
- Usability testing
- Wireframes
- Content analysis
- User personas
- Task matrix
- Analytics
- Folksonomy analysis
- Interviews
- Focus groups
- Low/high fidelity prototypes
- Kano analysis
- Prototype testing
- Information architecture
- Heuristic evaluations
- Swimlanes
- Interaction design
- Style guides
- Contextual inquiry
- Taxonomy analysis
- Sitemaps
- Research ➔ Design ➔ Implementation ➔ Release ➔ Test
What is Agile Software Development?

Agile development is broad term used to describe a specific group of methodologies that arose out of dissatisfaction with the way software development has been run for the past 30 years.

It is significant to note that agile development is itself, not a methodology. It is a grouping of 12 principles about how software should be developed.

These principles may be found at [www.agilemanifesto.org/principles.html](http://www.agilemanifesto.org/principles.html)

From: Integrating Agile Development in the Real World by Peter Schuh
Manifesto for Agile Software Development

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

From: http://www.agilemanifesto.org
Agile Software Development (XP)

From: Integrating Agile Development in the Real World by Peter Schuh
Now what?
User-Centered Design + Agile Software Development
User-Centered Design + Agile Software Development

1. Preliminary concept; idea can come from anywhere: user, customer, stakeholder, client, etc.

2. Preliminary research: user, technical, cost-benefit, Kano, etc.

3. Customer development partners identified, iterations scoped, user stories created

4. User research (task analysis, interviews) and design (wireframes, scenarios) done, based on upcoming iteration

5. Iteration begins; if available, customer feedback should be incorporated

6. Iteration complete, customer feedback solicited, software released, user stories and tasks adjusted

A Iteration identifier