Choosing the Right Usability Tool
(the right technique for the right problem)

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Workshop abstract

Selecting the right usability tool is critical because it ensures that you are using the usability team resources effectively to produce findings & recommendation on time and within budget to help find the right answers for your client.

Usability professionals reuse specific tools because they are easier to sell and better known e.g. Usability Testing, Expert Usability Reviews, however, these may not always the right tool for the job.

How do you ensure you are choosing the right tool for the job?

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Agenda and Goals

- User Centered Design
- The Toolkit
- Choosing the right tool
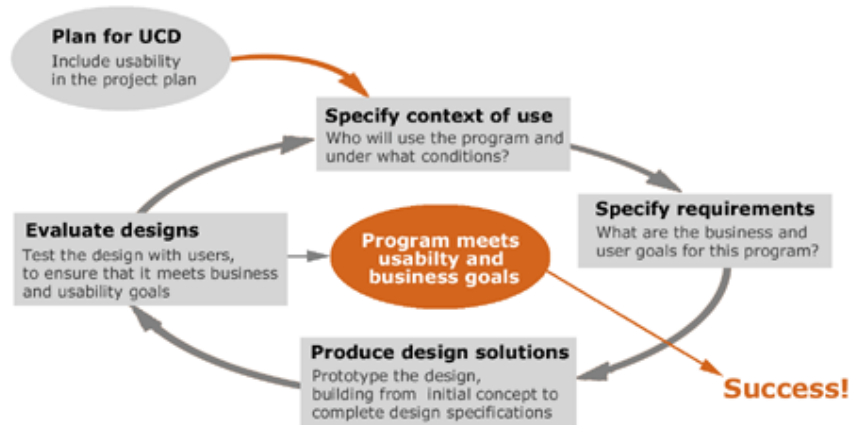- Popular tools
- Selling Usability
- Summary

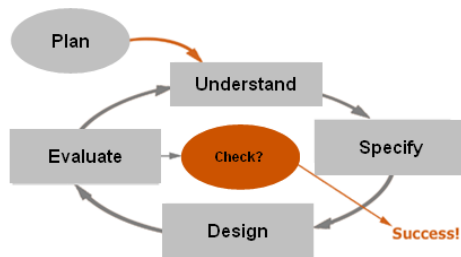## The User-Centered Design toolkit

- User-centered design is not a single methodology, applied to all project in exactly the same way. Instead it is:

    - A philosophy of working with the user or customer always in the center of the design
    - Working towards a goal of excellent usability
    - A collection of tools and methods that can be used to reach that goal

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UCD is a framework for a design process

ISO 13407 – an international standard – describes the process in five stages

Plan for UCD
Include usability in the project plan

Specify context of use
Who will use the program and under what conditions?

Specify requirements
What are the business and user goals for this program?

Program meets usabilty and business goals

Evaluate designs
Test the design with users, to ensure that it meets business and usability goals

Produce design solutions
Prototype the design, building from initial concept to complete design specifications

Success!

Let's put it in a simpler format

Plan

Understand

Evaluate

Check?

Specify

Design

Success!

"If at first you don't succeed, try, try again!"

- Traditional English proverb
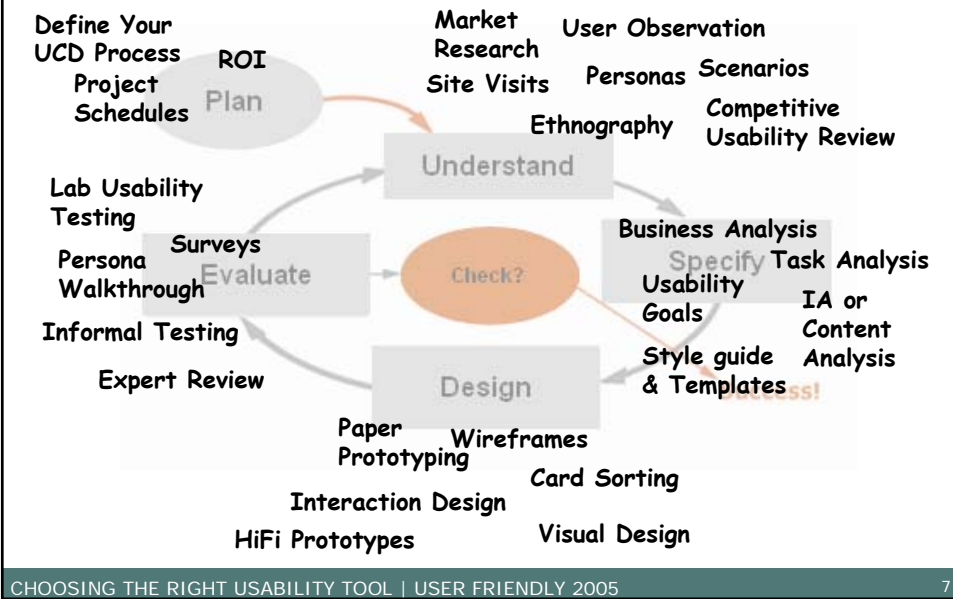
- **Plan**
  Your project plan should include all UCD steps
- **Understand**
  Start by defining the audience, context of use and other environmental factors
- **Specify**
  Describe the features and success factors for the project
- **Design**
  Create a prototype of the design solution
- **Evaluate**
  Test to see if the design met the specs

Matching techniques to UCD stage

Define Your UCD Process
Project Schedules
ROI
Plan

Market Research
Site Visits
Ethnography

User Observation
Personas   Scenarios
Competitive Usability Review

Understand

Lab Usability Testing
Surveys
Persona Walkthrough
Evaluate
Informal Testing
Expert Review

Check?

Business Analysis
Task Analysis
Usability Goals
IA or Content Analysis
Style guide & Templates

Specify

Design

Paper Prototyping
Wireframes
Card Sorting
Interaction Design
HiFi Prototypes
Visual Design

Putting the UCD toolkit to use

UCD has a rich toolkit, but you have to make good decisions about how to use the tools.

The real trick is to know which you need at any given moment.

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Understanding the business landscape

- User-centered design doesn't happen in a vacuum. To be successful, you have to understand:

  - Business organization and maturity
  - Project or product goals
  - Relationship to the product team

  - How usability can help improve the product

Business organization and maturity

- Are you working in a formal, structured environment, or an a more ad-hoc development team?

Formal product lifecycle?	Existing usability practice
UML/Rational Unified Process	Unknown or only as-needed
Six Sigma	Separate, optional process
Agile Development	Well developed process
Waterfall	Full integrated into development process

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Project or product goals

■ What type of project are you working on, and what are its business goals

Project goals?

Improve internal processes

Strengthen existing customer relationships

Attract new customers

Enter a new market

Business goals?

Increase sales

Decrease costs

Increase profits

Increase market share

Non-financial goals

Relationships

■ What is the relationship of the usability team to the rest of the product team?

Team structure?

Part of the team

Matrixed to the team

Internal consultant

External consultant

Familiarity?

Team is new to usability – you are introducing it

Team has some familiarity with usability, but you are new to the team

You have established relationship with team

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Tailor your technique to the "problem"

- **What are the questions or risk factors?**
  - New product concept or workflow? Unknown technology? Change management issues? What do you and your sponsor want to find out?
- **Who are the users?**
  - How well known are they? How hard are they to recruit or reach? What previous usability work exists?
- **What is the competitive landscape?**
  - Is it a new product or enhancements? What is the competition? How innovative is the product concept?
- **When do you need results?**
  - How fast will you have to work?
  - When is the launch date?

Scenario 1

- Your company has a usability lab with a staff. It usually takes 3-4 weeks to plan, run and report on a usability test.

  During a design review, a problem has come up because the development system does not support one of the interactions.

  Several alternative designs have been proposed, but you are not sure which one will be the best. Deadlines are looming!

  Is a lab usability test the best choice to answer this question? If not, what are the alternatives?

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Scenario 2

- Your company is planning to launch a service to replace an existing service.

  Marketing want to run a focus group to understand how users are using the current service to see how the new service can be improved.

  Usability is new in the company.

  Is a focus group the best choice to answer their questions? Alternatives?

Scenario 3

- A product has been operating for 1 year.

  Management would like to get some sort of baseline to improve usability.

  There has been no usability work done to date.

  What would you recommend?

Scenario 4

- A product is about to launch and there has been no usability input.

  Management are concerned that the product may not succeed and some critical functions are hard to use.

  You have 1-2 weeks before launch. What would you recommend?

Tailor your technique to the "problem"

- To understand the environment…
  - think observation, not usability testing
- To test a concept…
  - think rapid prototyping, not detailed specs
- To find market advantages…
  - think about an early competitive usability test

- Think about:
  - What do they want to find out
  - Time to market
  - Who needs it and when
  - Hidden agendas

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Techniques for learning about **users**

To...	Use...
Learn about users in their own context	Site visits (ethnography / contextual inquiry) to observe users in their own setting
Know their goals and how they work	Scenarios of uses and task analysis to explore and document their workflow
Identify factors in the environment	Context of use audit to understand their environmental, social and access needs
Identify quantitative demographics	Review (or conduct) market research on product usage, user demographics, etc
Document user analysis	Create personas to document key aspects of different user groups

Techniques for collecting **business data**

To...	Use...
Learn about a new business context	Conduct stakeholder interviews to collect input from different parts of the business
Find trends or gaps in business process	Review problem reports from technical / customer support for usability problems
Understand traffic patterns	Review site logs for patterns of traffic on a web site
Understand the competition	Conduct a competitive audit or comparative usability test with competitive products

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Techniques for analyzing **information and tasks**

For...	Use...
Understanding how users do their tasks today	Task / workflow analysis techniques to document steps and variations
Learning about relationships between information or tasks	Card sorting to create logical groups users will understand
Deciding how to organize the task in the application	Navigation and flow charts that group the interaction steps into screens
Exploring different interaction designs	Paper prototyping and task walkthroughs (with users or personas)

Techniques for **evaluating designs in progress**

For...	Use...
Team review of a conceptual design	Walkthroughs using scenarios and task models
Collecting input from colleagues on the design	Hallway reviews to collect rapid input
Testing aspects of the design, or reviewing progress	Usability evaluation with users
Measuring overall success in meeting usability goals	Summative usability testing with users Satisfaction surveys after release

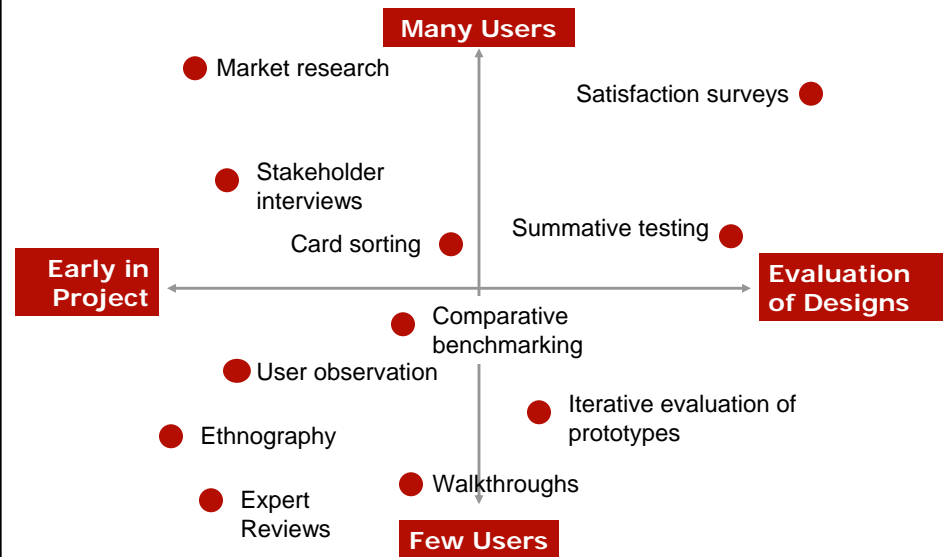Whitney Quesenbery | whitneyq@WQusability.com | www.WQusability.com

Tools gaining popularity

- Remote usability testing
  - Reduce need for travel and logistics. Allow teams to collaborate
- Site visits (contextual inquiry or ethnography)
  - Understand users' cultures. See "what they do" not just hear "what they say"
- Eye tracking
  - Understand how people really see a page to improve design
- Accessibility
  - Legal requirements. Need to reach older audiences. Mobile devices
- Participatory design
  - Involve users throughout the design process. Create tools for specialized needs

Understanding technique features

- It's not all context. Every technique has properties that make them better in some situations than others.

  - Primary goals for technique
  - Timing in the project
  - Number of users needed

- What do we need to know about these tools to make the right decisions?

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Use the right tool at the right time

Many Users

- Market research
- Satisfaction surveys
- Stakeholder interviews
- Card sorting
- Summative testing

Early in Project

Evaluation of Designs

- Comparative benchmarking
- User observation
- Iterative evaluation of prototypes
- Ethnography
- Walkthroughs
- Expert Reviews

Few Users

What tools do usability professionals use?

Most popular (70% or more)
- Informal Usability Testing
- Heuristic / Expert Reviews
- User Interviews
- Interface or Interaction Design

Also popular (50% or more)
- Wireframes or LoFi Prototypes
- Requirements gathering
- Personas & user profiles
- Task analysis
- Information Architecture
- Formal Lab Testing

Some use (33% or more)
- Surveys
- Contextual enquiry
- Competitive Benchmarking
- Remote Usability Testing
- Focus Groups
- HiFi Prototypes
- Visual Design

Others (less than 33%)
- Analyze web metrics
- Accessibility Reviews
- Eye tracking

Source: UPA 2005 Member Survey (N=1328)

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Usability testing has many purposes

Exploratory Research	Benchmark Metrics	Diagnostic Evaluation	Summative Testing
Understand users and context	Establish baseline metrics	Find and fix problems	Measure success of new design
Early in project	Early in project	During design	At end of process
How often: once	How often: Once	Done iteratively	How often: Once :
• 6-12+ users	• 8-24 users	• 4-8 users	• 6-12+ users
• Blend of interview and observation	• Focus on metrics for time, failures, etc.	• Less formal	• More formal
• May use competitive products	• Tests current process or product	• Focus on qualitative data	• Metrics based on usability goals
			• Users unassisted

Source: Ginny Redish

Getting the "right" users

Best

Adjust your techniques when you are not able to work with "real users"

● People who really use the product

● People who used to use the product or were recently in the users' role

● People who work with people who really use the product

● People with specialized knowledge that is not typical

● Experts, analysts and other designers

● Internal staff used to represent real users

Worst

What's wrong with focus groups?

- They are good for:
  - Exploring what users or customers *want*
  - Gaining consensus on a concept
- But..
  - Provide little depth from any participant
  - Capture opinion, not behavior
  - Strong group members can skew results
 - Provide weak qualitative data

You can get better data for the same cost with in-depth interviews

How Customers Think – Gerald Zaltman

Match techniques to usability goals

- **Effective**
  The completeness and accuracy with which users achieve their goals.
- **Efficient**
  The speed (with accuracy) in which users complete their tasks
- **Engaging**
  How pleasant, satisfying or interesting a product is to use
- **Error tolerant**
  The ability of the interface to prevent errors or help users recover from those that occur
- **Easy to learn**
  How well the product supports both initial orientation and deeper learning
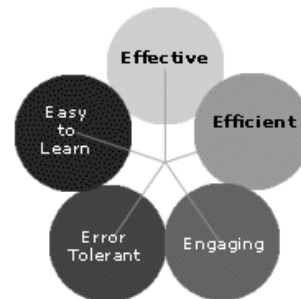
Read more about the 5Es on Whitney's website

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Design tests to evaluate for usability goals

Usability Goal	Types of usability testing needed
Effective	Evaluate tasks for how accurately they were completed and how often they produce errors
Efficient	Time tasks with realistic tasks and working versions of the software
Engaging	User satisfaction surveys to gauge acceptance review logs for 'time on site'
Error-tolerant	Construct task scenarios to create situations with potential problems
Easy to learn	Control how much instruction is given to test participants, or recruit participants with different levels of knowledge

Thinking on your feet

- Crazy things happen in usability testing. If you want to be able to adjust to them, you need to think about

  - Why you are doing this work
  - Protecting participants
  - The needs of the group

- Be flexible and creative

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Selling usability

- One way to sell usability is to show that you understand project management and can fit your work into the project timeline

    - Fit usability into a project, one step at a time
    - Find ways to get everyone involved
    - Tailor techniques to answer the right questions
    - Present results in a productive way

Fit usability into a project

- Start with one small project that demonstrates value
- Think about the real business need, don't just "sell the concept"

- Example:
  In a company that had never done any usability testing, we ran an informal usability test with an internal user. When they saw that even that simple activity produced good insights, they were more confident about moving forward.

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Find ways to get everyone involved

- People are more open to ideas they have helped create. Participating lets them see that it's not "magic" but real, valid techniques

- Example
  Use participatory walk-throughs to get everyone thinking about the problem.

- Example
  Give everyone jobs during a usability test, so they can focus on something specific

Tailor techniques to answer the right questions

- Don't be rigid about methodology…but do understand where the limits are, so the work still has integrity. Brainstorm possible adjustments in advance, so you are able to react quickly.

- Example
  If you cannot recruit "real users," find people within the company who are the best alternatives.

- Example
  If you are working with a team that is used to quantitative research, plan tests in phases, so they can see when you have enough data.

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Present results in a productive way

- Address the questions you were trying to answer

- And make your presentation appropriate for a business conference…
  - It's not a university research paper - focus on results, not method
  - Organize your presentation for a business audience: put the most important information up front
  - Don't attack the product or design – the people who created it are in the audience

- Use the report to suggest the next steps

Summary

When you are choosing the technique to use, consider:

- **Time**
  - How fast does the client expect results?
  - How much time do you have to devote to the project, including preparation, the actual sessions and reporting?
  - How much time does the client need to review your session plan?
  - How long will it take to recruit participants?
  - How long will it be before the design can be iterated and re-tested?

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Summary

When you are choosing the technique to use, consider:

- **Materials**
  - What kind of prototype or product do you have to work with?
  - Do you have access to a lab space or equipment?
  - Do you need a place for people to observe the test?
  - Do you have standard templates and tools to work with, or do you need to create them?

Summary

When you are choosing the technique to use, consider:

- **Reporting**
  - Will you need to demonstrate the credibility of your work?
  - Who will you report the results to? Do you need to involve the team?
  - Do you need quantitative data or other metrics?
  - Do you need video highlights?

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Summary

When you are choosing the technique to use, consider:

- **Politics**
  - Is there a clear champion for usability to support the project?
  - What are the roles and responsibilities of the people you will work with?

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Whitney and Daniel are part of UsabilityThatWorks.com, offering training in usability and user-centered design