Faster Usability Testing in an Agile World
"The biggest waste of all is building something no one wants"

- @ericries #LeanStartupMI via @MelBugai
Create a great, usable, accessible, and relevant experience
Harmonize Our Language
Agile

- Sprints
- Iteration
- Wall – scrum or kanban
Usability Testing is...

- Representative users
- Doing real tasks
- Being observed
- Using prototypes or live products
Demo / Acceptance Testing

• After development is done
• Stakeholders, purchasers – not users
• Product is demonstrated (not tested)
• Not in context of real use
• Not what we’re talking about
Can Test...

• Websites, mobile, products, services
• Ideas
• Prototypes: Paper to hi-fi
Measure Ability to Achieve Goals

- Effectiveness
- Efficiency
- Learnability
- Satisfaction
- More...
Locations

• Anywhere (conference room, remotely)
• Any Stage (earlier = better)
• Anytime (un-moderated)
• Realistic test environment
Early Testing Reduces Risks

• Early research reduces chance of major issues later
• Major work is done on priority items
Benefits of U Testing

• Save time & money
• Minimize human cost (users & team)
• Better UX means increased
  – Usefulness
  – Efficiency
  – Productivity
Bringing it to Agile
Shared Values

• Individuals and interactions
• Working software
• Customer collaboration
• Responding to change
Integrating with Agile

Increased understanding of Users
Agile Integration

- Use each study to pick up information
- Additional user research done in parallel
Testing Methods
Any Method Can be Adapted

• Quick
• Bare minimum of effort
• Get needed feedback
• Provide recommendations
• Repeatable
Scope Effort

- Consider budget, resources
- Time
  - Recruiting
  - Facilitating
  - Analyzing
- Adding participants increases budget & time
Paper, Clickable or Real Code?

• Always start with paper
  – Guerilla / hallway test
  – Users may misunderstand

• Clickable prototypes
  – Easier to understand
  – Can easily change

• Real Code
  – Great if it’s the right solution
Paper or Clickable Prototype

• Rapid Iterative Testing & Evaluation (RITE)
• Traditional Testing
  – In-Person
  – Remote more challenging
RITE Overview

• Qualitative user feedback
  – actions + comments
• Series of small usability tests
• 3 participants each day
• Minimum of 3 days of testing
  – Iteration between testing days
  – Total of 5 days
RITE Process

Test & Level of Effort

1. High
2. Medium
3. Low

Update

Test
Recap Sessions

• End of each day - after the last session
• Room with a whiteboard.
• About 30 minutes.
• Discuss:
  – trends seen
  – concerns
  – recommendations
  – prioritize changes for the next round
  – list lower priority changes for future iterations
RITE Results

• Final prototype
  – Vetted with users
  – Base for recommendations

• Light Report: “Caterpillar to Butterfly”
  – Screenshots show progressions
  – What changes were made and why
What Works for RITE

• Best used early in project lifecycle
  – Early concepts
  – Need to be vetted with users
  – Can assist in quickly shaping designs
Real Code

• Traditional Testing
• In-Person or remote
• Less users, shorter sessions: analyze at lunch
  – Recommend 3 or more users
  – Half hour to 1 hour each
• Great for prototypes too!
## Remote Testing Options

<table>
<thead>
<tr>
<th></th>
<th>Moderated</th>
<th>Un-Moderated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researcher is present</td>
<td></td>
<td>No Researcher during study</td>
</tr>
<tr>
<td>Same effort as in-person</td>
<td></td>
<td>Minimal effort</td>
</tr>
<tr>
<td>Limited number of</td>
<td></td>
<td>High number of participants per day</td>
</tr>
<tr>
<td>participants per day (3-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate feedback</td>
<td></td>
<td>Test data compiled usually within 2 days</td>
</tr>
<tr>
<td>Get to the “Why?” by asking questions</td>
<td></td>
<td>Reduced or no ability to ask questions</td>
</tr>
</tbody>
</table>
Remote - Moderated

- Lab setup
  - Robust computer
  - Screen sharing software
- Participants camera (optional)
- Internet on both ends
  - Speedy
  - Separate from phone line
Remote – Un-moderated

- No “Lab” needed – online software
- Participants camera (optional)
- Participant’s internet only

- Recommend to complement Moderated Testing
Benefits of Remote

- No travel
- Easy to set up
- No special room required (advised!)
- Can be conducted from almost anywhere
- Option to see their real environment
- Drawback: no F2F
Software*

Userlytics
Loop 11
UserZoom
ChalkMark

GoToMeeting
Skype
Morae
Silverback

Un-Moderated
Simple
Moderated
Complex

*Incomplete list with subjective ratings
Make Observers Work

• Observers (PO, PM, dev, etc.)
  – Take notes
  – Help operate software/recording equipment
  – Greet participants
Formal Lab?

• Your team
  – Need them to show up
  – Need to be able to schedule as needed

• Recommend laptop/portable lab
  – Can be semi-permanent
  – Ready when you are (minimal setup)
Regular Testing

(Yes, this is an old idea; a great one!)
Bring it On!

• Small focused tests
• Reduce waiting for recruitment
• Once per week or per Sprint
• Same day mid-week (not Monday or Friday)
User Testing Day!

- Make team aware
- Invite everyone
  - Watch remotely
  - Recurring meeting invites for stakeholders
What to test?

• Identify what to test at start of Sprint
  – Work in Progress
  – Multiple projects
  – Prototypes
  – Concepts, rough ideas, brainstorming
  – Competing designs, (A/B testing)
  – Comparative studies across market
  – User research
“Teams should stretch to get work into that day’s test and use the cadence to drive productivity.”

- Jeff Gothelf - http://blog.usabilla.com/5-effective-ways-for-usability-testing-to-play-nice-with-agile/
Why Regular?

• Team becomes:
  – accustomed to steady stream of qualitative insight
  – insight ensures quick decisions...line up with business and user goals

Adapted from Jeff Gothelf - http://blog.usabilla.com/5-effective-ways-for-usability-testing-to-play-nice-with-agile/
Planning is Tight

- UX
  - Plans study
  - Identifies additional work
- Recruitment “automated”
Hire a Recruiter

• Allows you to focus.

• Good recruiters:
  – find right participants.
  – give regular updates.
  – take care of directions, confirmations, incentives, etc.
Do it Yourself

• Internal resource who REALLY understands who you need

• Create a panel (large recruits, less often)
  – Internal customer lists, user groups
  – Schedule as needed
  – Use cautiously
Use Site to Recruit

• Pop up on your site:
  – http://ethnio.com
Include PWD

• People with disabilities
  – “We are all only temporarily able-bodied. Accessibility is good for us all.”
  – Get to spirit of the law (Section 508, WCAG 2.0)

- @mollydotcom at #stirtrek 2011 via @carologic
Make it Repeatable
Pre-Book Your Rooms

• Test & Observation Rooms
• Any location will do
  – Conference rooms
  – Offices
  – Quiet corner of cafeteria
  – Remote
Create Reusable Templates

• Screener
  – Technology use/experience
  – Knowledge of topic
• Scripts/Guides
• Consent Forms
• Data Collection
Honorariums

• Make it easy – buy ahead
  – Gift cards from retail stores (Target, Starbucks)

• More complex
  – Amazon Gift Cards
  – Product credits
Notetaking

• Keep it simple
• Paper or Computer
  – Depends on situation
  – People are less bothered by typing
  – Can you pay attention?
# Find Patterns in Data

## Objectives - Noticed - use...

<table>
<thead>
<tr>
<th>Item</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
<th>P5</th>
<th>P6</th>
<th>P7</th>
<th>P8</th>
<th>P9 - Inter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email form</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Order kit</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Search</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Adv Search</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Customize Kit</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Kit item Desc</td>
<td>Add desc</td>
<td>Add desc</td>
<td>Add desc</td>
<td>Add desc</td>
<td>Add desc</td>
<td>Add desc</td>
<td>Add desc</td>
<td>Add desc</td>
<td>Add desc</td>
</tr>
<tr>
<td>Add cover letter</td>
<td>Yes</td>
<td>Never</td>
<td>No, like it</td>
<td>Email all</td>
<td>No, never</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Find in Favs</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Find Prev Order</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Like/Dislike</td>
<td>Better than</td>
<td>Easy to use</td>
<td>Specific</td>
<td>Specific</td>
<td>Specific</td>
<td>Specific</td>
<td>Specific</td>
<td>Specific</td>
<td>Specific</td>
</tr>
<tr>
<td>Email/order fit w</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## Task 1: ...Find "ABC Project Brief"

1. how likely are you to complete a similar task? (1-5)
   - Success on task (1-success, 3-failure)
   - How would you rate this tool for helping to find the doc? (1-5)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
### Quicker – on Big Paper

<table>
<thead>
<tr>
<th>Issue</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search used</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Widget 1</td>
<td>used</td>
<td>N/A</td>
<td>used - unsure about</td>
</tr>
<tr>
<td>Task 1 Notes</td>
<td>3 – easy</td>
<td>2 – needed help</td>
<td>3 – easy</td>
</tr>
<tr>
<td>Task 2 Notes</td>
<td>2 – needed help</td>
<td>2 – easy</td>
<td>2 – needed help</td>
</tr>
<tr>
<td>Task 3 Notes</td>
<td>2 – needed help</td>
<td>3 – easy</td>
<td>Ran out of time</td>
</tr>
<tr>
<td>Task 4 Notes</td>
<td>2 – needed help</td>
<td>3 – easy</td>
<td>Ran out of time</td>
</tr>
</tbody>
</table>
Debriefing After Testing
True Statements

• All interfaces have usability problems
• Limited resources to fix them
• More problems than resources
• Less serious problems distract
• *Intense focus* on fixing most serious problems first

Debrief with Team

• Assumes stakeholders watched tests
  – If not, wait for UX analysis
• Quick analysis to quick decisions
• All decision makers MUST be present
Goal

• Identify top 5 or 10 most serious issues
  – Top 3 from each list
  – Prioritize from lists
  – Commit resources for next sprint
  – Stop

Guidelines

- Stay on Topic
- Be Constructive
- Don’t get distracted by small problems
- Intense focus on fixing most serious problems first
Make Useful & Usable Recommendations - Quickly
Transform Data

• Look for patterns
• Read “between the lines”
• Know what you’ve got
  – Sort, reorganize, review, repeat
  – What refutes your expectations?
  – Surprises?
  – Outliers?
Documentation

• Reduce, reuse
• Use email, IM, etc.
• Put it on the wall
  – Must be easy to understand
  – Quickly absorbable
Email or One Pager

• Goal of report
  – Think about audience
  – How will it be used?

• Include
  – Goal of study
  – What will be fixed and who assigned to
  – Tasks attempted
  – Who observed
  – Future research/enhancements
Tweak, Don’t Redesign

• Small iterative changes
  – Make it better now
  – Don’t break something else

• Take something away
  – Reduce distractions
  – Don’t add – question it

Do UX Early & Often

- Make users visible
- Information radiators
  - Test findings
  - Artifacts
  - Personas
  - Word Clouds - IA
Recommended Readings

- *Rocket Surgery Made Easy* by Steve Krug
- *Beyond the Usability Lab* by Bill Albert, Tom Tullis, Donna Tedesco
- *Handbook of Usability Testing* by Jeffrey Rubin and Dana Chisnell

These books cover various aspects of usability and user experience design.
Contact

carol@mw-research.com

slideshare.net/carologic

speakerrate.com/speakers/15585-caroljsmith

www.mw-research.com
References

• Albert, Bill, Tom Tullis, and Donna Tedesco. Beyond the Usability Lab.
• Gothelf, Jeff. http://blog.usabilla.com/5-effective-ways-for-usability-testing-to-play-nice-with-agile/
Tool Considerations

• In-person or remote?
• Lab or on-site?
• Prototype limitations (can it be online?, is it a document or a clickable site?)
• Number of observers, number of participants?
• Number of facilitators?
• Logging and video editing needs (time on task, highlight video creation)?
• Surveys before or after?
• Eye tracking?
Usability Testing Software

• Morae
• Ovo
• SilverBack (Mac only)
• UserWorks
• Noldus
• Tobii (Eye-tracker)
• SMI (Eye-tracker)
• SurveyMonkey
Screen Sharing Software

• GoToMeeting – http://www.gotomeeting.com
• Lotus Sametime Unyte – http://www.unyte.com
• YuuGuu -- http://www.yuugguu.com
• WebEx – http://www.webex.com
• Yugma -- https://www.yugma.com/

• Trouble Shooting: CoPilot - https://www.copilot.com/
Satisfaction Questionnaires

- **Standard Usability Measurement Inventory (SUMI)**
  - office/desktop software, purchase
  - 50 questions

- **Website Analysis and MeasureMent Inventory (WHAMMI)**
  - Purchase
  - 20 questions

- **System Usability Scale (SUS)**
  - Free
  - 10 questions
Recommended Sites

- Usability.gov
- W3C Web Accessibility Initiative
  - http://www.w3.org/WAI/
- Accessibility Standards in US (Section 508)
  - http://www.access-board.gov/sec508/508standards.htm
- Jakob Nielsen
  - http://www.useit.com
- UPA – professional UX association
  - http://www.upainternational.org/