



Agile UX Research Practices Applied

Miki Konno
Sr. User Experience Researcher
Microsoft Corporation

Introduction



- Miki Konno – Sr. UX Researcher/ Human Factors Engineer
 - UX Experience
 - Honda, Sony, Symantec, Jacob Nielsen/ Don Norman Group (NNG), Hewlett Packard Company
 - Windows Media Center, IPTV (Mediaroom), MSN Video, Local/ Entrainment, Visual Studio (TFS) at Microsoft
 - Education Background
 - Human Factors/ Applied Experimental Psychology (Consumer Product evaluation, Ergonomics, Statistics)
 - Industrial/ Organizational Psychology (Psychometrics, Human Performance, Organizational Behavior, M&A, Org Behavior/ Culture)
 - Expertise Areas
 - Ergonomics, HCI, HW/SW Interaction, consumer product evaluation, multi-media (TV/Video/Entertainment), international usability, complex software systems, enterprise software, Agile tools

Typical UX Research Data Acquiring Cycle



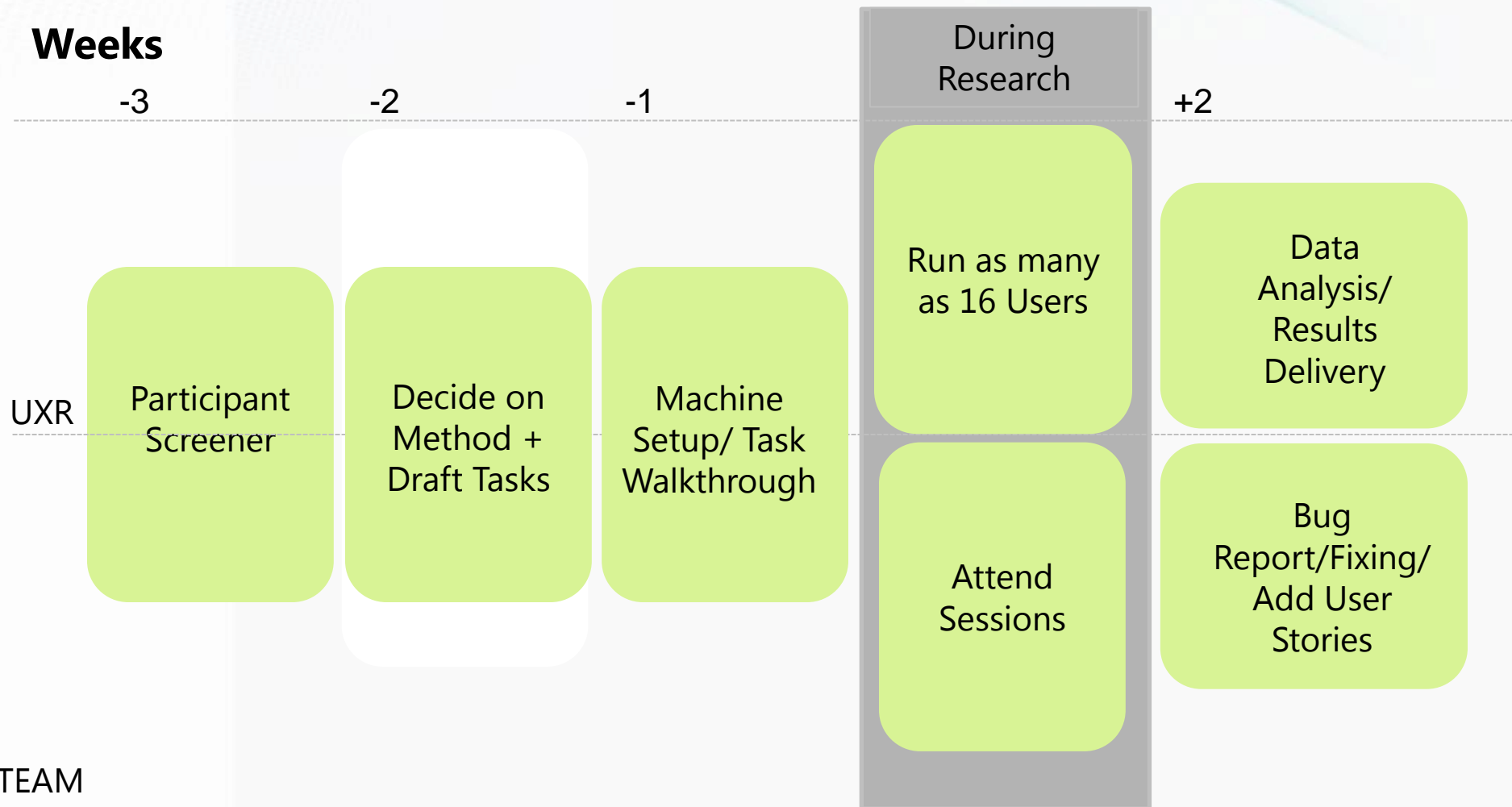
Full UX Research Process

- ✓ Full-Research
 - Site Visits
 - Persona Research
 - Ethnographic study
 - Large N quant survey
 - International study
 - Competitive benchmark



Common UX Research Lab Study Cycle

– works better for E2E scenarios, Benchmark, Intl research

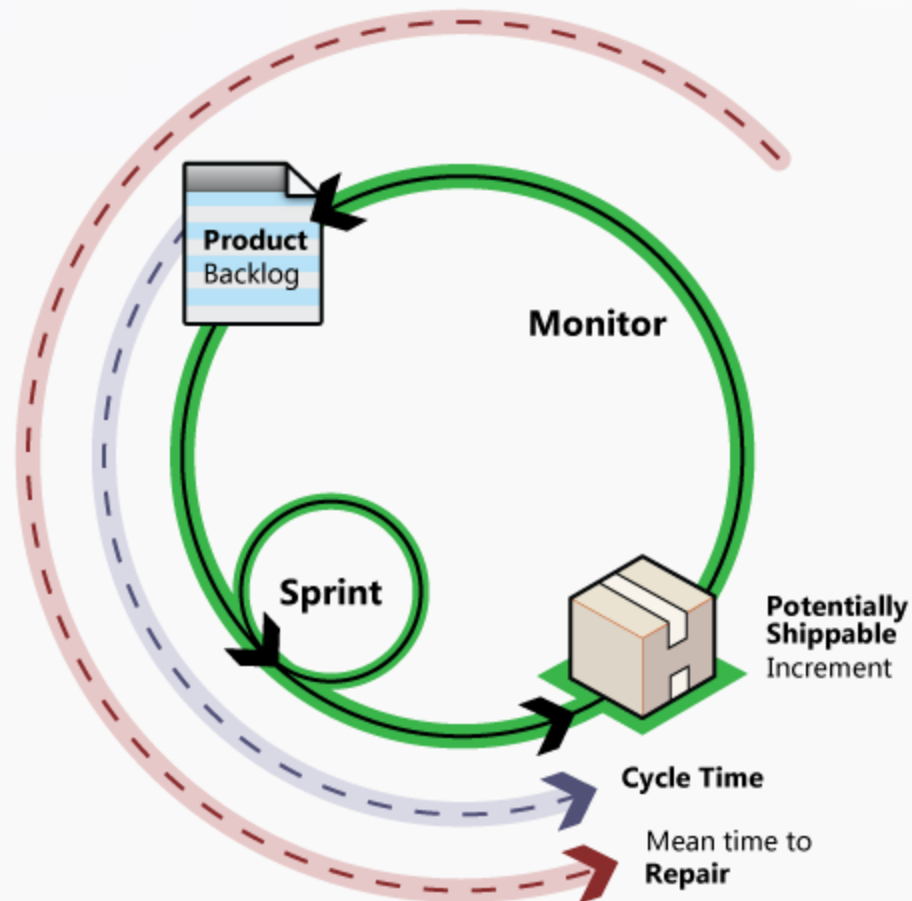


Current Challenges for UX Data Acquiring Cycle in the Agile Environment

1. "We want to get user feedback **BEFORE** coding starts"
2. "We want to get user feedback on this sprint release **NOW**"
3. "There is **NO TIME** to test every user story"
4. "A usability study takes too long...we want the results **FAST**"



The UX Research Cycle needs to be faster!



What have we done in the Agile Environment? – TFS Team Case Studies

- ✓ RITE Study
- ✓ Quick Pulse Study
- ✓ Persona Happy Hours

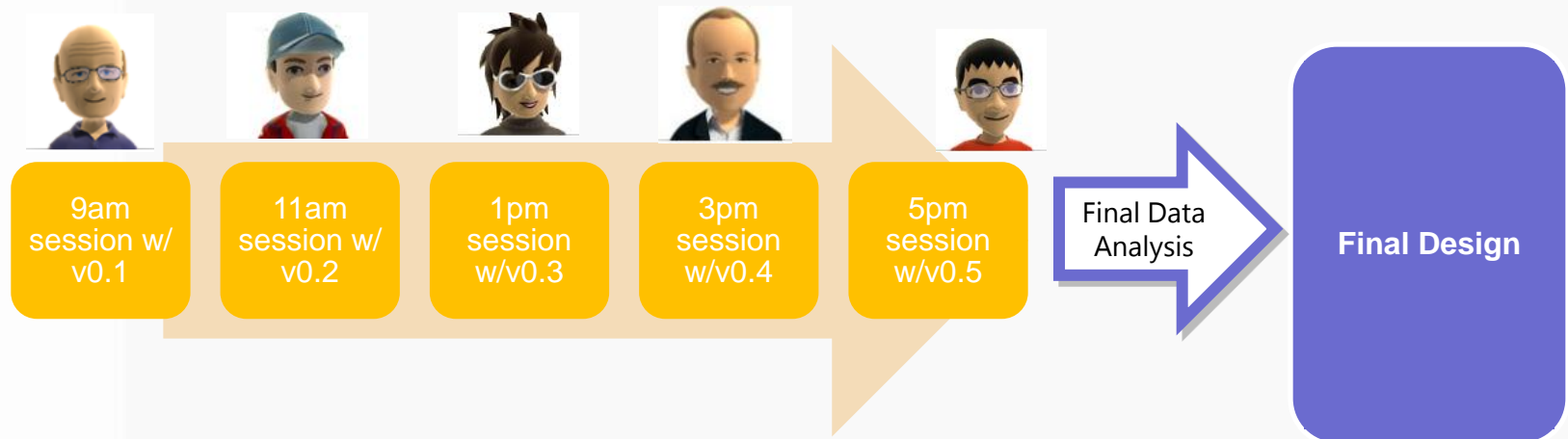
Agile UX Research Processes Used in TFS

1. Rapid Iterative Testing & Evaluation

- Continuous design iterations in one day
- Design elements/ UI Navigation exploration
- Design improvements in small increments

RITE Study: Rapid Iterative Testing Evaluation

- RITE Study
 - The study can be accomplished in **ONE DAY**
 - Requires a dedicated UX researcher to facilitate, and Designer (or developer) to iterate the design
 - RITE Study Steps
 - » Changes to the interface are made as soon as an issue is identified and a solution is clear
 - » Then the changed interface is tested with the next user



RITE Study Pros

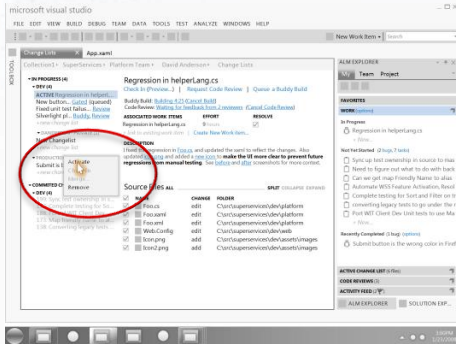
- Pros
 - Agile
 - You can complete the study in One day!
 - Collaborative
 - The team (UX researcher, PM, Designer, Developer) needs to come to an agreement on each design revision
 - Visual
 - Design Improvements are instantly visible
 - Cost
 - It can be done by one designer (or developers) in one day

RITE Study Cons

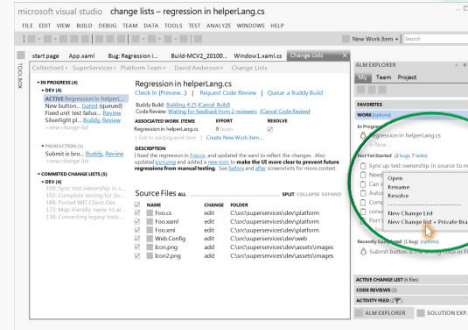
- Cons
 - Technical feasibility
 - Some features may not be technically feasible to change quickly
 - Feature limitations
 - Not all features can be included in the prototype
 - Quality and performance
 - Prototype could have faster performance and better quality, so it could be misleading

RITE Examples (TFS)

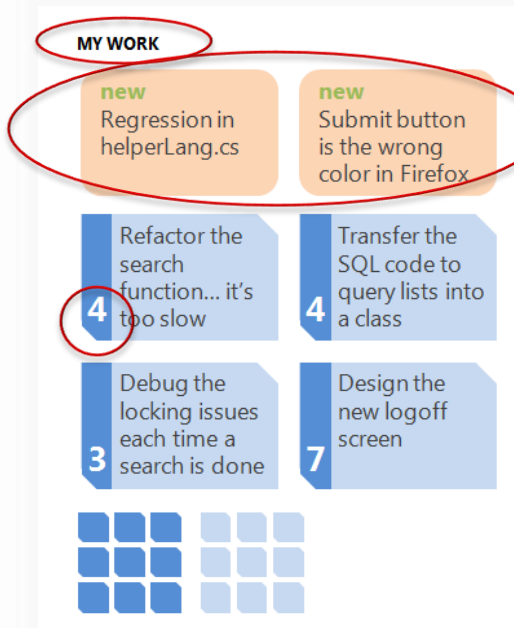
Task Switching
VO.1



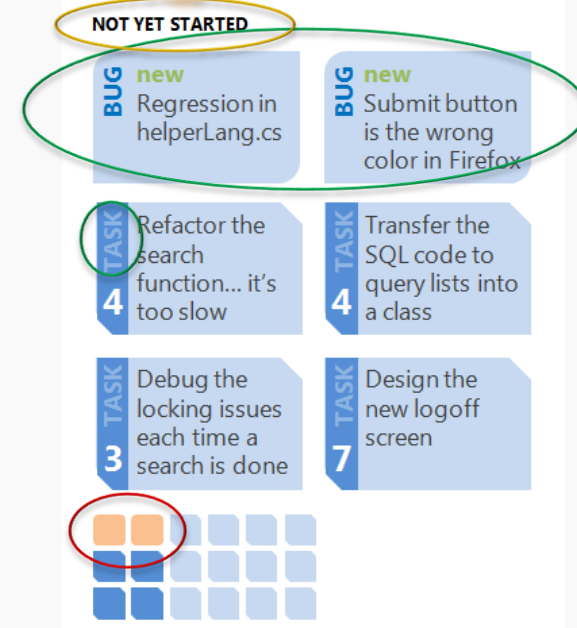
Task Switching
VO.2



Task Board
VO.1



Task Board
VO.2



Agile UX Research Processes Used in TFS

2. Quick Pulse Study

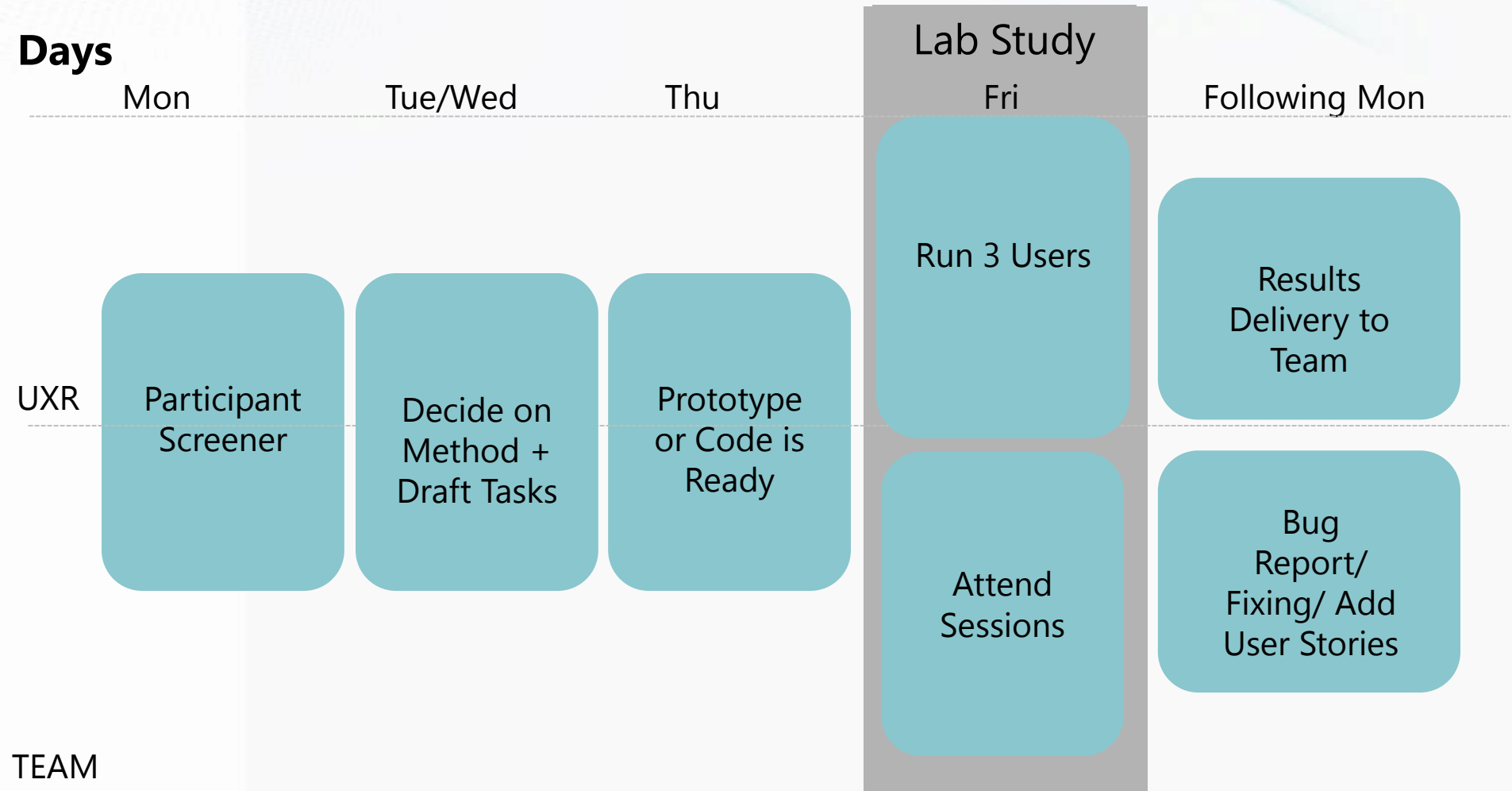
- Continuous user feedback with 3-week sprint
- Storyboard testing
- Sprint release testing

Quick Pulse Study

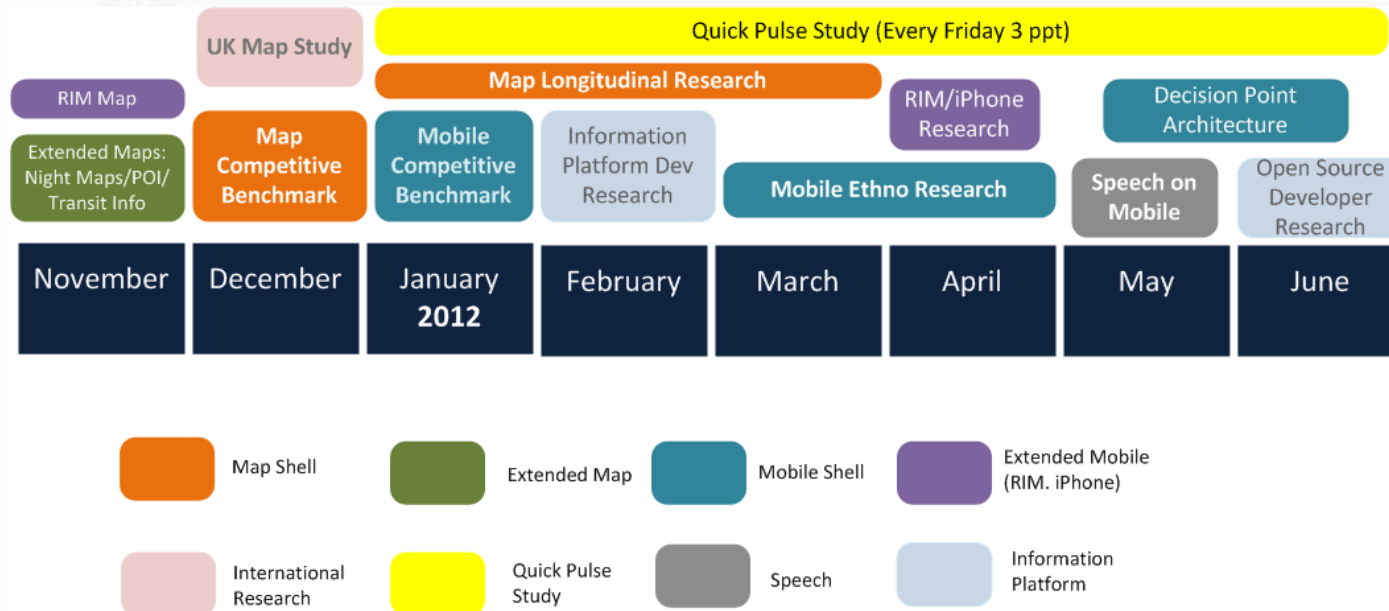
- Recruit 3 users weekly to come into the lab every Friday
- One hour for each participant
 - 9-10, 10-11, 11-12pm: 3 sessions on Fridays
 - If we need to test more than one areas, we'll test 6 participants on Friday
 - Use the same lab every week
- 3 personas (target users) to alternate
 - Peter – Dev Lead/ Scrum Master
 - Angie – Agile Product Owner
 - Elvis – Agile Developer
- Quick summary of findings sent out to the team by Monday or the results presentation with team the following week
- Email results sent out to larger audience including management
- We implemented the QPS for every other month

Quick Pulse Lab Study

- works better for smaller features + user stories in Sprints



Quick Pulse Study Phase 1: Planning



- Plan for feature areas, budget, timing, resources, and lab allocations

Quick Pulse Study Phase 2: Preparation

Usability lab



Observation Room



Hosted TFS Testing Demo by Mario

ACCOUNT DEVDIV TEST1 TEAM SUBMIT FEEDBACK | E

info project groups members security

devdiv

Actions ▾

search

Actions ▾	SUMMARY	EFFECTIVE PERMISSIONS
 Craig Smith craigsl@live.com	BASICINFO general profile information for this identity	
 Daniel Rodriguez danielr@live.com	Display Name: Angela Cohn Username: angelac Domain: acme	
 Mark Robertson markr@live.com	edit profile change picture remove from collection	
 Angela Cohn acmeangelac	MEMBERSHIP INFO group membership summary detailing groups this user is a member of.	
 Name Last namelast@live.com	<ul style="list-style-type: none">This user is a direct member of 2 other groups	manage membership

Sprint Planning Storyboards by Gregg

my home Product X Team 1 settings | angie@hotmail.com

BACKLOG BOARD QUERIES SOURCE BUILD

SPRINT 3 JAN 1 - JAN 15

Sprint 3

January 1 - 15 (2 weeks, 1 day) 10 working days

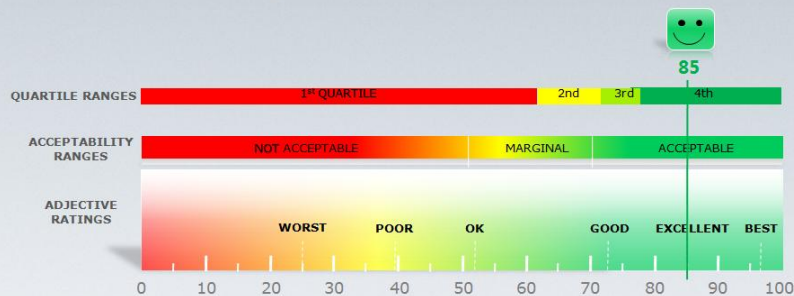
PRODUCT BACKLOG	BACKLOG	CAPACITY	CAPACITY (0 HRS)	CAPACITY BY ACTIVITY
Sprint 1	16 Story Points	20 15	63	Development (0 hrs) 46
Sprint 2				Testing (0 hrs) 17
Sprint 3 (current)				TEAM MEMBERS
Sprint 4	5 As a customer, I need to login in with a user/name password		24	Aaron Cathcart (0 hrs) 20
Sprint 5	Code the screen		5	Andrew Olson (0 hrs) 17
Sprint 6	Write unit tests		8	Phil Hodgson (0 hrs) 15
Sprint 7	Write test automation		3	Dmitry Goncharenko (0 hrs) 11
	Manual testing		5	
	Fix bugs		3	
	8 As a customer, I want to view products that are available		27	
	Code the screen		8	
	Write unit tests		6	
	Write test automation		4	
	Manual testing		8	

Quick Pulse Study Phase 3: Execution



Quick Pulse Study Phase 4: Communication

User Perception Results: SUS Score



- The System Usability Scale (SUS) measures the *utility* of the system

User Performance Results: Task Success

- Overall task success rate was **83%** 😊
- There were a few errors even for successful tasks (task 2, 5, & 6) but most users figured things out within few minutes

	P1	P2	P4	S/F	Success Rate
Task 1	P	F	P	2 out of 3	66%
Task 2	P	P	P	3 out of 3	100%
Task 3	F	P	P	2 out of 3	66%
Task 4	F then P	P	P	2 out of 3	66%
Task 5	P	P	P	3 out of 3	100%
Task 6	P	P	P	3 out of 3	100%
Task 7	P	P	P	3 out of 3	100%
Task 8	P	F	P	2 out of 3	66%
					83%

Task3: Create Labels – Shape Selection



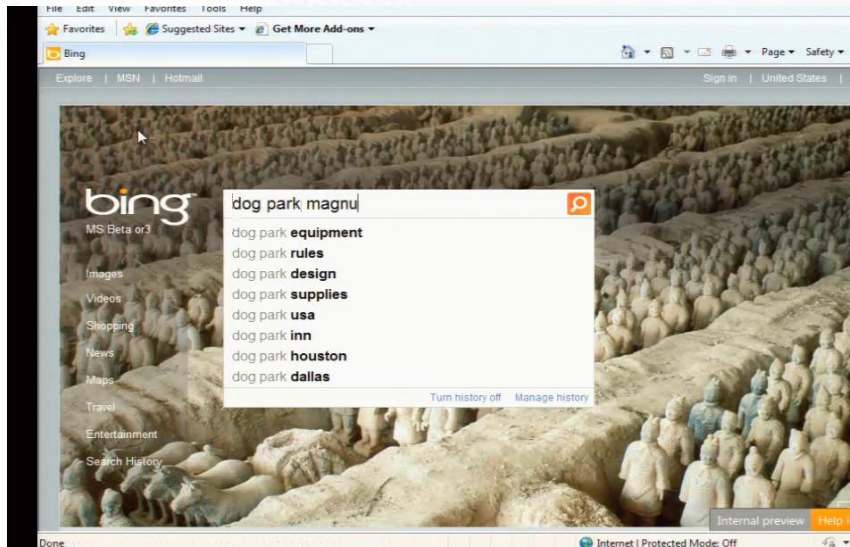
- All users picked the Title for the first label "Bob, Welcome to...."
 - It has a bigger font and it seemed to be obvious choice for them
 - A few picked Label, but once they used it, they returned to Title for the rest of the tasks
- All users wanted to be able to see the details of the shapes more easily
- Some users thought there were redundant shapes
 - "What's the difference between Title and Subtitle? Since we're changing the text anyway, why do you need to differentiate?"
- Most users thought that the tooltip didn't help determine which shape to use



Quick Pulse Study Applied: Bing Core Search Team

- One target user type (Information Seekers)
- They recruit 3 users to come into the lab every Thursday
- Quick summary of findings is available to the team by Friday
- They use dedicated contractor to run Quick Pulse Studies
- The research focus area is much more specific
- The focus is core search behavior
- The setup is shorter/ simpler
- No formal results presentation, informal debriefing only
- A quarter newsletter with summary of all findings sent to entire product team

Quick Pulse Study Applied: Bing Core Search Team



Free-formal Search Exercise



Eye Tracking Study



Quick Pulse Study Applied: Bing Core Search Team



Quick Pulse Findings

January 20th 2011 | Conducted by Rensika Abayaratna

Topic: Bing Shopping, Auto-suggest Facets

PM: Cornelia Caragea | Design: Gautam Satarkar

What we did

We had 3 participants in the lab interacting with a prototype version of Bing Shopping, which had the proposed design's functionality. Participants carried out 3 queries using the prototype. The objective was to find out if participants would discover the feature, use it successfully and if they liked it.

The prototype (for the digital camera query) is: <http://kievalpha/shopping?d4setremotehot-commack-demo1&reatment=2>

Findings

Summary

Discovery and initial use is likely to be an issue with this feature. However, once they discover and interact with it successfully by learning how to use it, users will tend to see its value immediately, and like using it.



Orange auto-suggestions (shopping query specific)

Facets Menu (displayed by selecting Orange auto-suggestions)

Some users will not discover the feature

Two of the participants did not discover the faceted auto suggestions in the shopping prototype without help from the moderator. One participant discovered and used the faceted auto suggestions without being prompted.

Reason for non-discovery

The reason most participants missed using the faceted auto-suggest facility was because they did not look at the auto-suggest feature at all. Typically, participants typed a query in the search box and did not pay attention to the auto-suggestions while typing or before executing the query. This behavior has been documented on numerous occasions in the past.

Once they discover it they may not realize how it works

At first, two of the participants, who needed to be prompted to notice the faceted auto suggestions, did not realize there was an extra section (facets) to the auto suggestions in orange. They expected to be taken to a page with categories: answers being displayed under each category. When this did not happen and they were prompted further, they noticed the menu of facets to the right and recognized the need to choose from it.

Once they learn to use it they like it

Once they were familiar with it, all the participants liked the faceted auto-suggest feature.

One participant said it well: "If I was new to Bing, it would take me a while to figure this out, but once I got it, I think it was really nice."

Understanding how faceted suggestions are different from other suggestions takes a while

Once they started using the shopping results, they appreciated the differences, as quoted below:

- "I learned that orange tells me more about the product, for example.
- The black ones are limited to the product name.
- I like the orange so much I am clicking on the stuff on the right (facets menu).
- Now, the separate blacks are coming above and below the orange list, I think it's really nice."

Tapes

Tapes for studies can be viewed here (http://www.bing.com/umethow/242591_242591_242591_242591)

A quarterly newsletter



Monthly Quick Pulse Newsletter

April and May

What are Quick Pulse Studies

Quick Pulse Studies are a quick way to start gathering user feedback without a lot of planning overhead. We schedule 3 participants to come into the lab each week and have them work with different parts of our site using code, prototype or screenshots. These studies have less rigor than our traditional lab studies but they can provide the team with a "gut check" when there isn't time for a more traditional usability study. For more information on the Quick Pulse Studies, see [here](#).

We'll be running these studies on most Thursdays for the next couple of months at 9, 11, 1, in our lab in Bravern 2. Feel free to stop by and observe these studies any time.

Topics Covered (click on topic to go directly to summary)

- [1](#) search box on MSN | toolbar defender
- [2](#) dynamic cards | travel
- [3](#) toolbar defender 2 | users' own queries
- [4](#) task bar in answers | reference in aBar | users' own queries
- [5](#) google left rail | users' own queries
- [6](#) hover in local answer

In summary

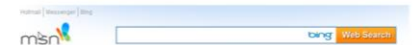
Week 1

Topic 1: Search Box on MSN

PM: Elizabeth Hill, RM: Stacey

- Participants said they didn't use the search box often on a portal and instead tended to use the search box in their browser

- Participants didn't seem to be confused by the current search box on MSN. The understood how it worked and how it was presented on the screen.
- Overall, participants liked the MSN homepage layout.



Topic 2: Toolbar Defender

PM: Chris Kim, Syed Muneer-ud-Haq

- When installing the Bing Bar, users had trouble understanding what options to choose to accomplish their task.
- Users were confused by the text in the toolbar defender dialog box because the choice between the options wasn't clear. Editorial recommended new text to help with the confusion and
- For long term changes, we recommended a change in flow for the dialog box which we tested in a later QPS (see below for findings on Toolbar Defender 2)



See full findings from week 1

Week 2

Topic 1: Dynamic cards

PM: Diana Hsu, Design: Becky Johnson

- Users are not likely to see the Dynamic cards if they appear below the fold
- Participants liked to see showtimes and locations first followed by review information
- Participants liked movie reviews with ratings (especially the graphical treatment of the numbers)

Quick Summary Findings

Quick Pulse Study Pros & Cons

- Pros
 - Agile
 - Flexible
 - Minimal advanced planning
 - Immediate product impact
- Cons
 - No formal protocol
 - Lower data reliability
 - Risk of not utilizing the users
 - Risk of not running the formal study

Quick Pulse Study Application

- Works well with...
 - Sprint-specific work
 - Smaller/ Simpler features
 - Sprint demos
 - Quick UI fixes w/wireframes
 - Simple navigations
 - Simple scenarios
 - Paper prototypes
 - Storyboards
- Doesn't work well with...
 - Method requires large N sample
 - Long-term/ E2E scenarios
 - Complex systems/ navigations
 - Competitive analysis
 - Benchmark studies
 - Card sort study
 - Surveys
 - International Studies

Agile UX Research Processes Used in TFS

3. Persona Happy Hours

- Bring real users (our persona profile) to mingle w/ Team
- Talk and hang out with real users with food, music, and drinks!

3. Persona Happy Hours

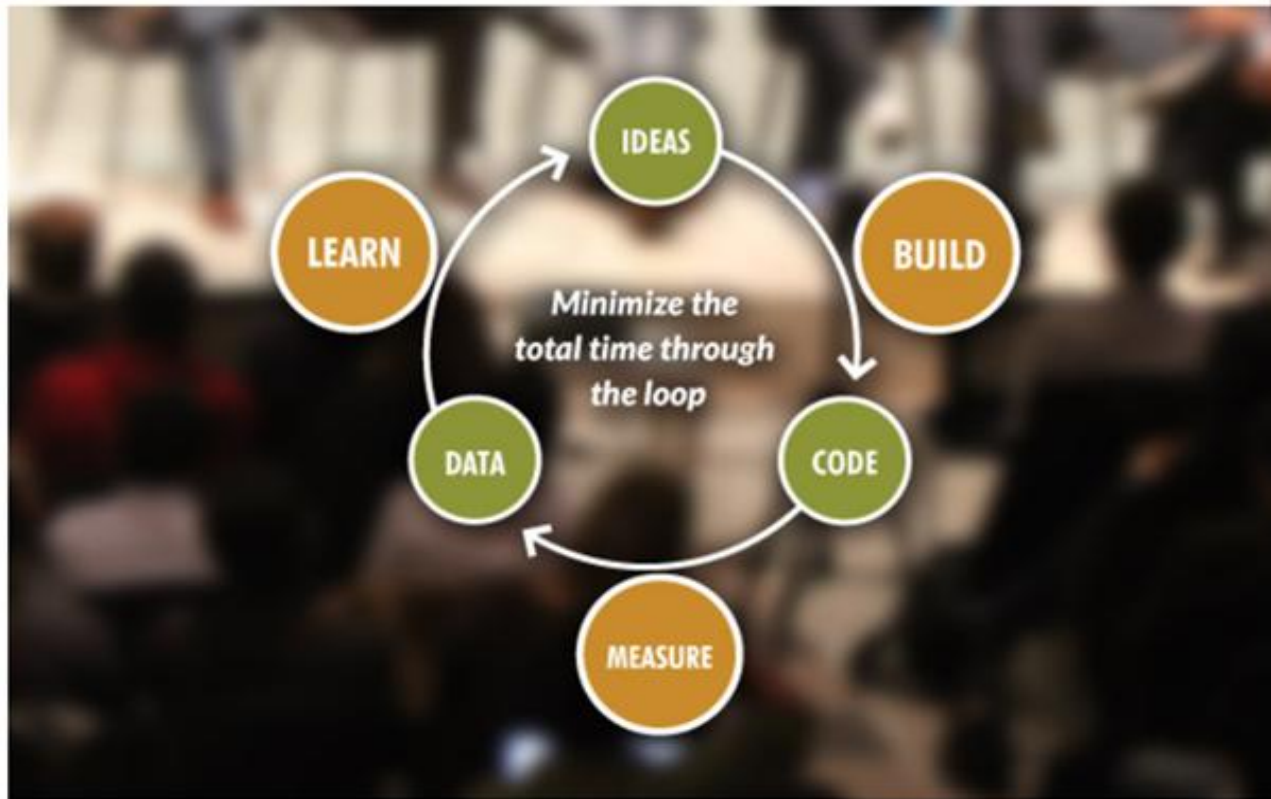
- Bring the real users (persona profile) n Friday afternoon
- Invite designers, PMs, Devs, QAs to mingle with them
- A great way to get to know about target users in the informal settings



Persona Happy Hours



Goals of Agile UX



*The reference is from <http://theleanstartup.com/>

Q&A