

Agile UX Research Practices Applied

AGILE ALLIANCE 2012 CONFERENCE

MIKI KONNO, AUGUST 15TH 2012

Introduction



■ Miki Konno – Sr. UX Researcher @ Microsoft

- User Experience Researcher/ Human Factors Engineer for last 15 yrs
- Worked @ Honda, Sony, Symantec, Jacob Nielsen-Don Norman Group (NNG), & HP
- Worked @ Microsoft – Windows, MSN, Visual Studio (TFS), and Bing Platform division (Mobile/ Maps/ Speech/ Dev portal)

■ UX Research Specialized Areas

- Web, Search, Mobile, Maps, TV/Video,, HW/SW Interaction, International Research, NUI (touch, speech, gestural), & Developer tools (ALM, Agile PM/ RM tools)

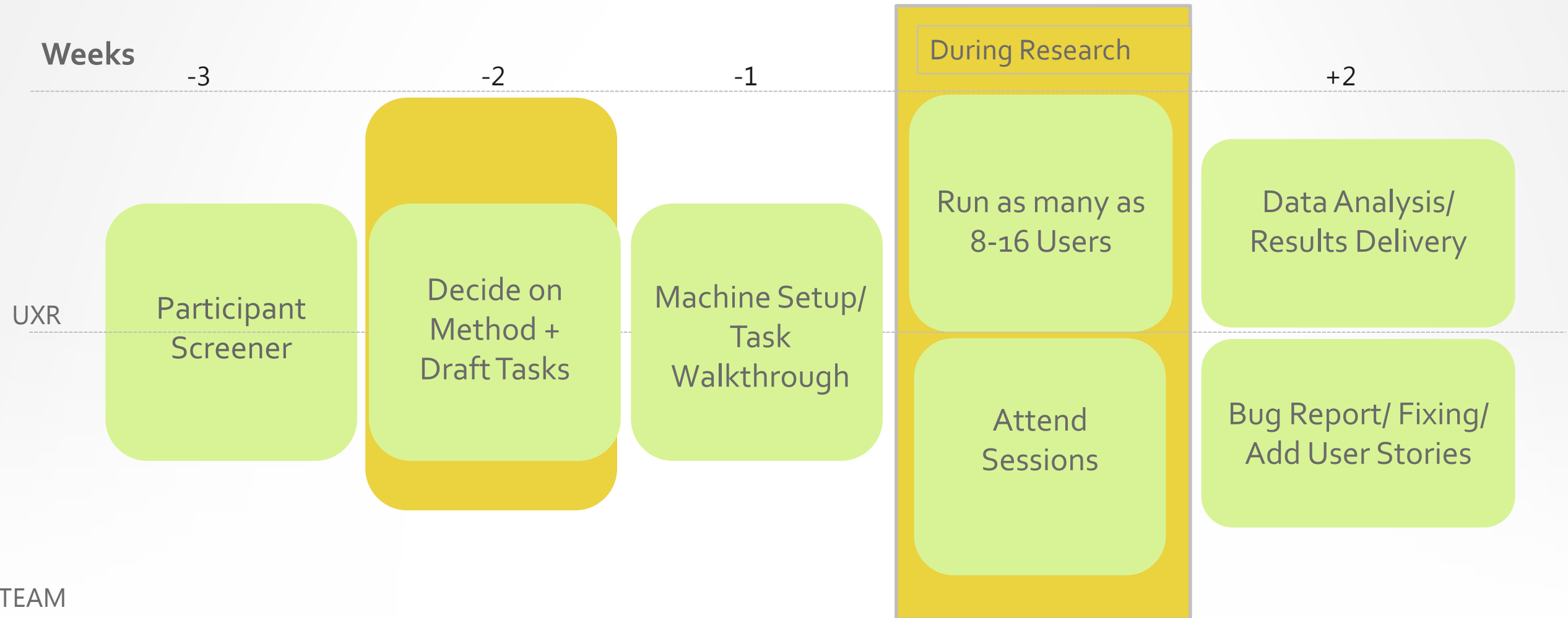
■ Education Background

- Advanced degrees in Human Factors Engineering/ Applied Experimental Psychology and Industrial/ Organizational Psychology
- Certified Scrum Product Owner

Typical UX Research Data Acquiring Cycle



Full UX Research Lab Study Timeline

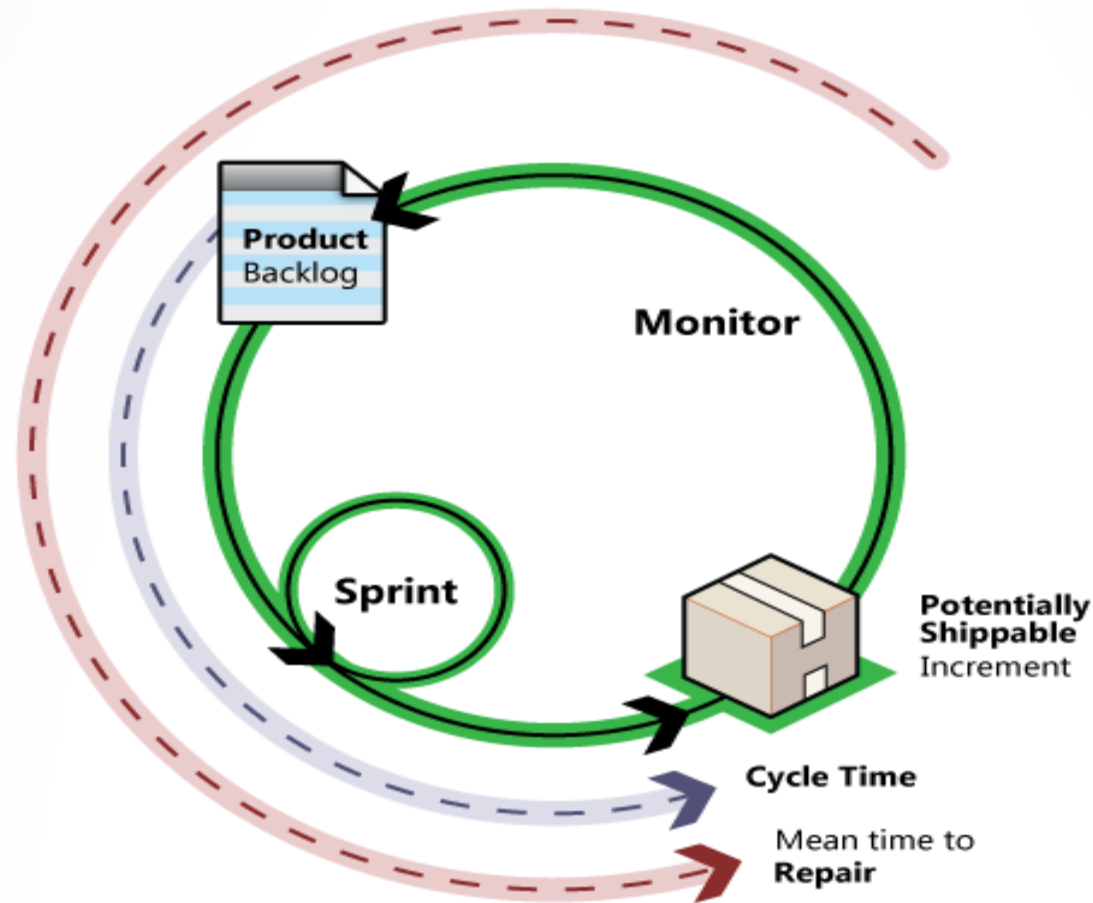


UX Challenges for Agile Teams

- *"We want to get user feedback **BEFORE** coding starts"*
- *"We want to get user feedback on this sprint release **NOW**"*
- *"A usability data analysis takes too long...we want the data **FAST**"*
- *"There is **NO TIME** to test every user stories"*



The UX Research Cycle needs to be faster!



What have we done in the Agile Environment?

- Microsoft TFS & Bing Teams Case Studies

- ✓ RITE Study
- ✓ Online Customer Panel
- ✓ Quick Pulse Study
- ✓ Team Involvement with Personas

Agile UX Research Processes

1. RITE: Rapid Iterative Testing & Evaluation

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

Rapid
Iterative
Testing
Evaluation

RITE: Rapid Iterative Testing & Evaluation

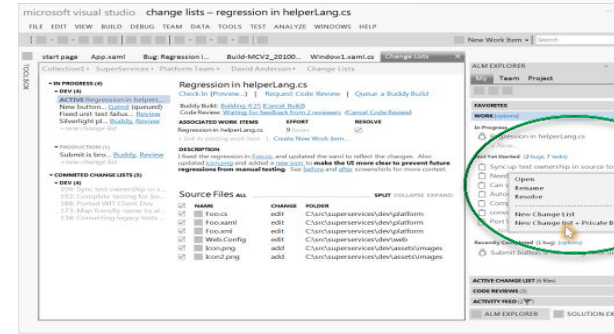
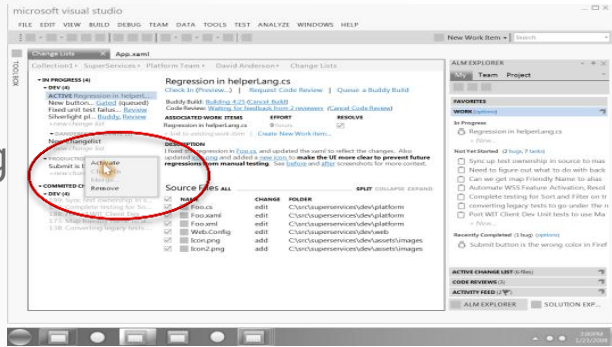
■ RITE Study Protocol

- Continuous design iteration
- Requires a dedicated UX researcher to facilitate, and Designer (or developer) to iterate the design
- 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
- You could be done in one day, or spread out to a few days

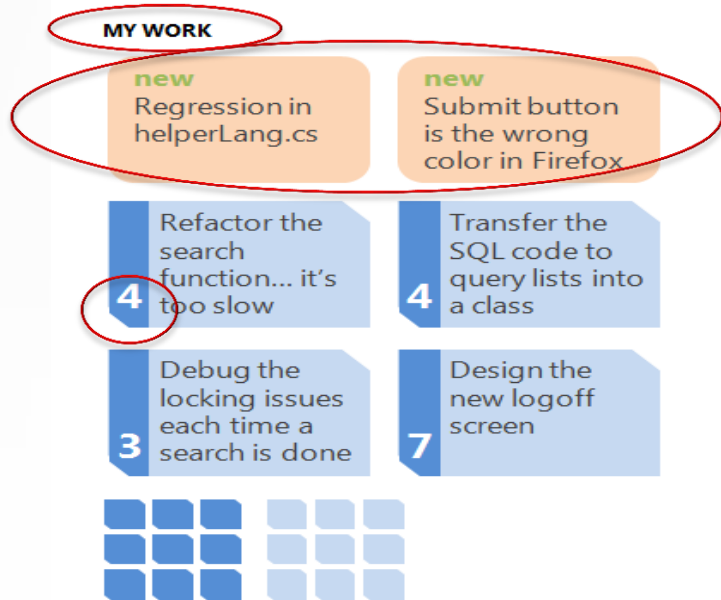


RITE Examples (TFS)

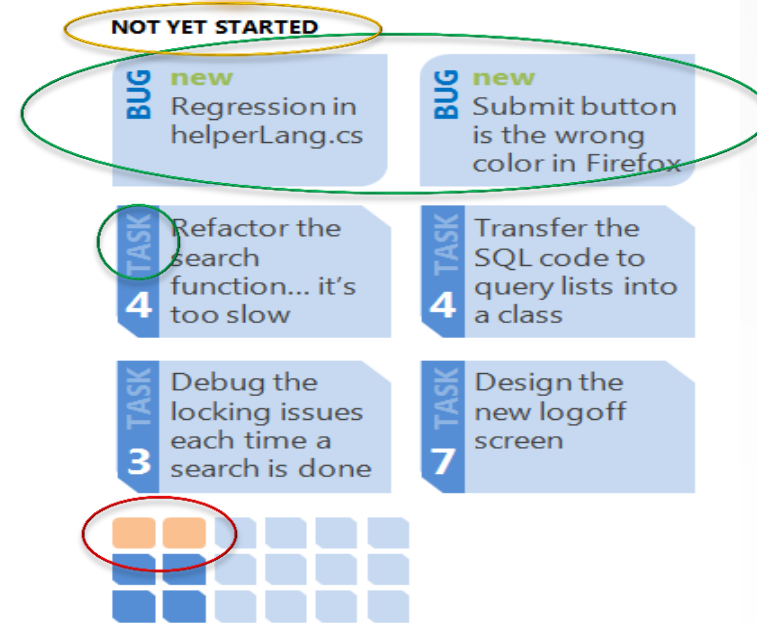
TE/Task Switching
v0.1



TE/Task Switching
v0.2



Task Board
v0.1



Task Board
v0.2

RITE Study Pros & Cons

■ Pros

■ Agile

- You can complete the study in short time

■ Collaborative

- The team (UX researcher, PM, Designer, or Developer) needs to come to an agreement on each design revision

■ Visual

- Design Improvements are instantly visible

■ Cost less

- It can be done by one designer (or developers) in one day

■ 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

- Hi-fidelity prototypes could have faster performance and better quality, so it could be misleading

Agile UX Research Processes

2. Online Customer Panel

- Online feedback panel with target users
- Product Owners run Bi-weekly panels
- Same panel members can see the product improvement over time



Online Customer Panel

- What is the **online customer panel**?
 - A group of **pre-screened participants** who have expressed a willingness to participate in **customer feedback sessions online**
- **5-6 customers** are recruited to participate in online panels
 - Make sure that they are the **target users**
 - Make sure that they **are able to commit to the length of time needed**
 - Make sure to recruit the right type of participants
- **Product Owner** to run the online panels
 - One hour of the participants time is needed **every other week**
 - Can use any types of **materials** (e.g., wireframe, interactive prototype, or sprint demos)
 - Get customer feedback on **attitudes and opinions**
- Results are **available instantly**
- Feedback can **be recorded** with customer consent (NDA ready)
 - Through Skype, Lync, Live Meeting, OneNote, Adobe Connect, WebEx etc.

Online Customer Panel Pros & Cons

- Pros

- Short preparation time
- Present virtually anything to customers
- Cost less
- Use customers from anywhere
- Customers become comfortable over time
- Don't need a UX researcher to run the panel (opinion based, not observational based)

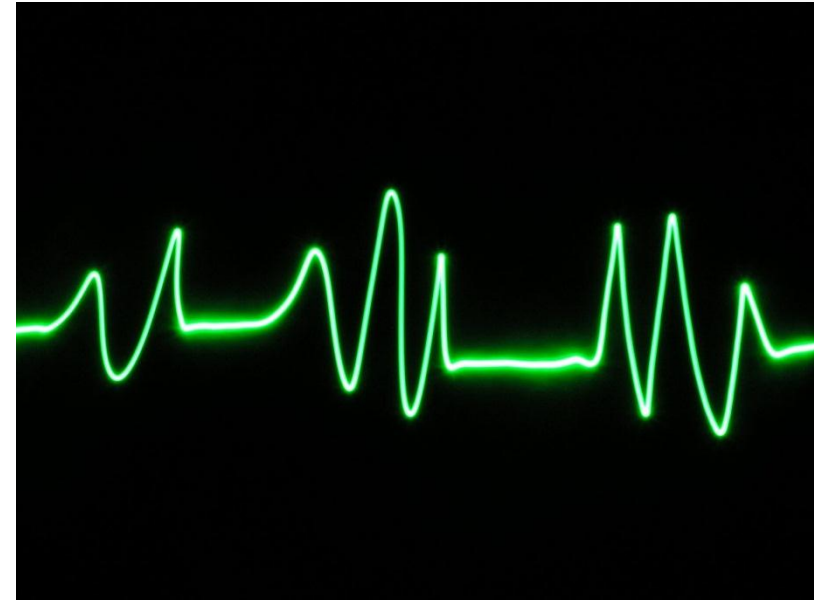
- Cons

- Hard to find the customers who can commit the time
- Hard to manage 5-6 people talks at the same time
- Hard to manage opinionated persons in the group
- Learning effect of customers
- Difficult to test discoverability, navigation, information architecture

Agile UX Research Processes

3. Quick Pulse Study

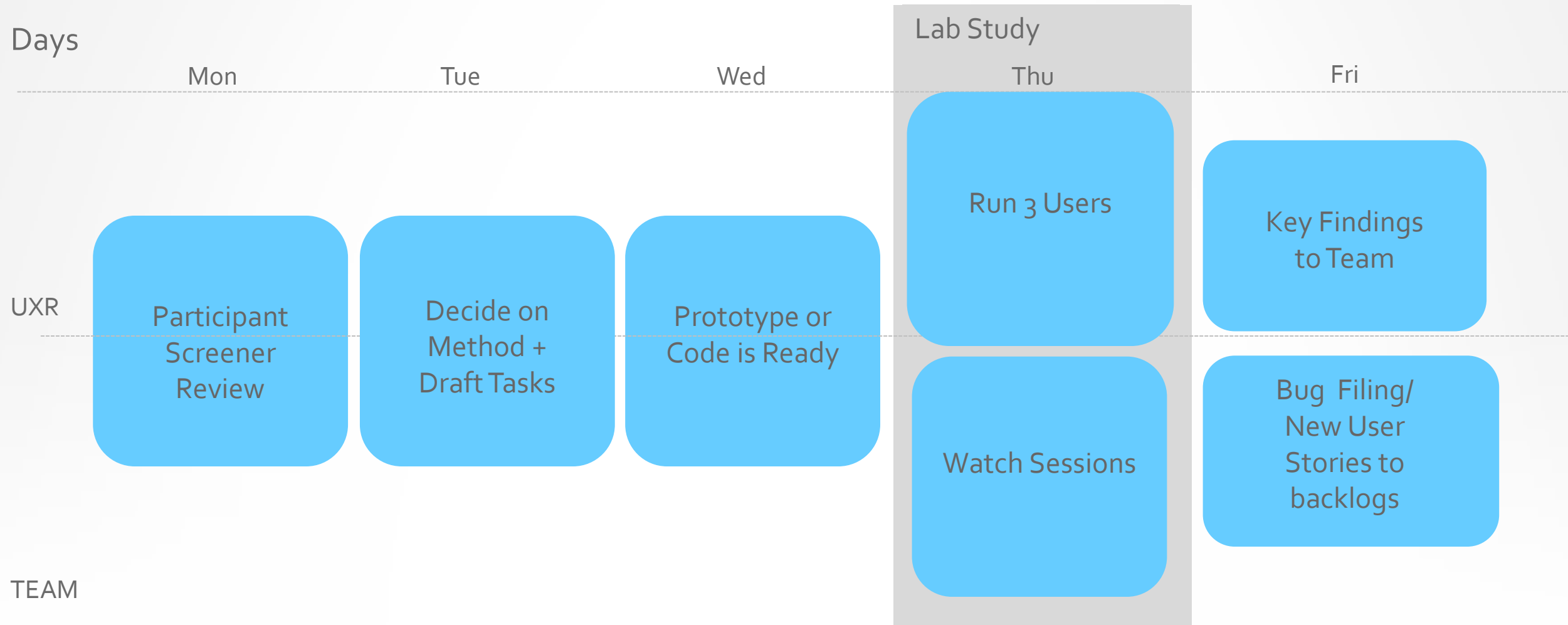
- Continuous user feedback with **sprint cadence**
- **One week** from start to finish
- Meet team's **urgent needs/ tweaks** quickly
- Work well with **user stories / features**
- **Flexible** to test **anything** (i.e., mockups, builds)
- **Minimal** advanced planning
- **Immediate** product impact
- **Personas** for recruiting



Quick Pulse Study Process Summary

- Recruit 3 users weekly to come into the usability lab every Thursday
- One hour for each participant
 - 9-10, 10-11, 11-12pm: 3 sessions in the morning
 - If we need to test more than one area, we'll add 3 more on Friday
 - Use the same usability lab (or conference room) every week
- Quick summary of findings sent out to the team by Monday
- Work well with sprint planning mockups and sprint builds
- Alternate between different personas (target users)
- Email results sent out to a larger audience including management
- Complements with the full-scale research (strategic, long-term)

Quick Pulse Lab Study Schedule



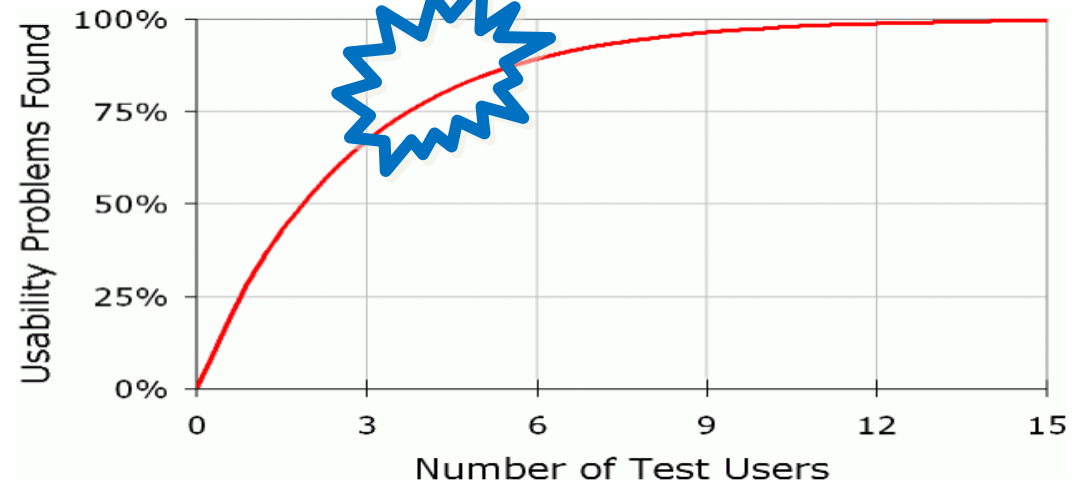
QPS uses only 3 users? WHY??

- User research studies often run by a behavioral scientist professional – most URs hold MSs or/and Ph.Ds in Psychology
- The best result comes from testing no more than 5 users and by running as many small tests as you can afford
- The most striking truth is that zero user gives zero insights

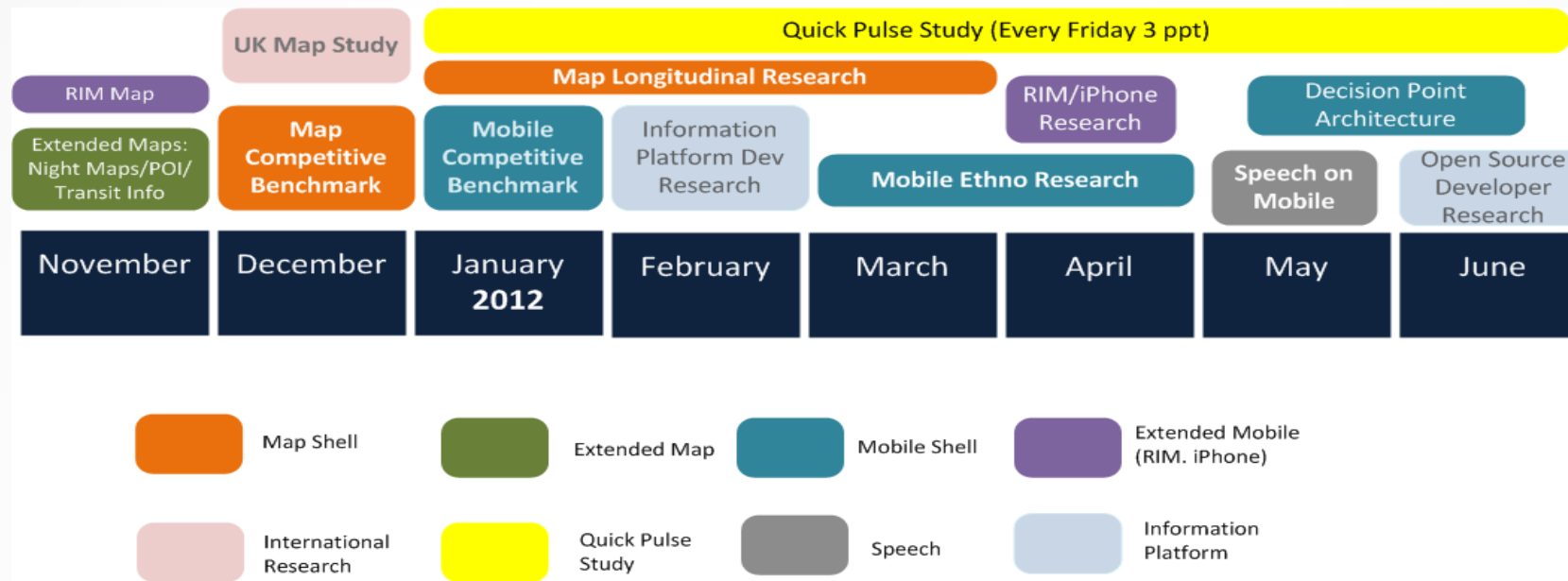
Usability guru, Jacob Nielsen's famous quote: "80% of usability issues can be found by no more than 5 users"

*Reference from useit.com, Jacob Nielsen's Alert Box, March 19, 2000

$N(1-(1-L)^n)$
where N is the total number of usability problems in the design and L is the proportion of usability problems discovered while testing a single user. The typical value of L is 31%, averaged across a large number of projects we studied. Plotting the curve for $L=31\%$ gives the following result:



Quick Pulse Study Step 1 – FY Planning



- Plan for feature areas, budget, timing, resources, and lab allocations
- Assess other full research requirements at the time of planning stage
- Align with other strategic research: competitive benchmark, longitudinal research, ethnographic research, international research, concept testing through focus groups, etc.

Quick Pulse Study Step 2 – Preparation

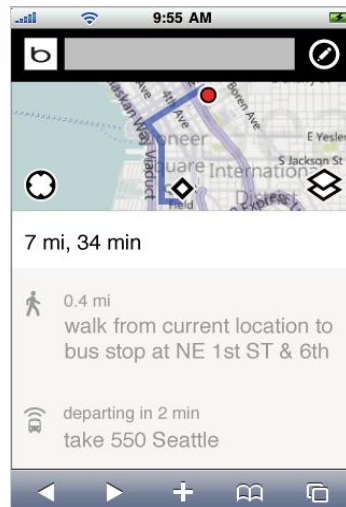
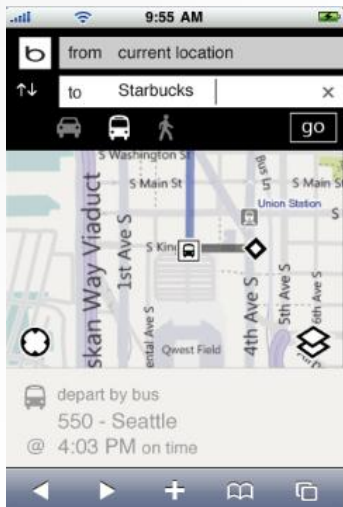
Traditional Usability lab Or Living Room lab



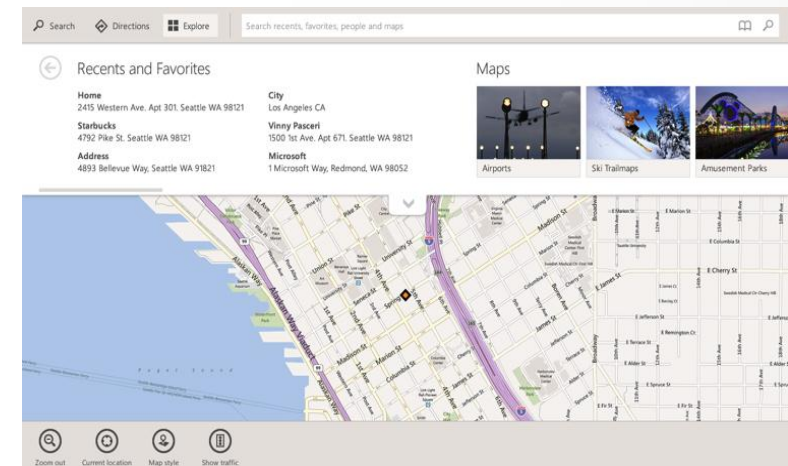
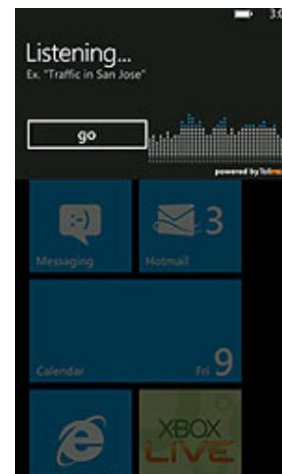
Observation Room



Sprint Planning Mockups by designer



Sprint Demos by scrum master/ product manager



Quick Pulse Study Step 3 – Execute!



Quick Pulse Study Step 4 – Communication

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
Task1	P	F	P	2 out of 3	66%
Task2	P	P	P	3 out of 3	100%
Task3	F	P	P	2 out of 3	66%
Task4	F then P	P	P	2 out of 3	66%
Task5	P	P	P	3 out of 3	100%
Task6	P	P	P	3 out of 3	100%
Task7	P	P	P	3 out of 3	100%
Task8	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

bing Web Local More

disney store in seattle

RELATED SEARCHES: Disney Stores Seattle, Washington, Southcenter Disney Store, Bellevue Disney Store, The Disney Store in WA, Disney Store Canada, Disney Store Store Locations, Disney Store in Bellevue WA, Disney Stores Washington State

ALL RESULTS: 1-10 of 20,400,000 results - Advanced

Disney's® Official Store
5000+ Toys, Clothes & More. Shop Disney's® Official Store.
www.DisneyStore.com

Disney Cruise Deals
Wide Selection of Disney Cruises Out of Seattle. Book Online Today.
Disney.CruisesOnly.com

Disney Store Locations in Seattle, WA - Insider Pages - ...
Chain Store Locator - Disney Store Locations in Seattle, WA ... Browse Categories recommendations that matter most
www.insiderpages.com/.../disney_store/Seattle/WA - Cached page - Mark as spam

Disney Store - Seattle, WA, 98125 - Citysearch
User rating: 4/5 - 3 reviews
Jan 14, 2011 - (206) 368-2656 - The Scene - Feeding the addiction to the Mouse is made easy at this all-things-Disney depot. Giant movie screens ...
seattle.citysearch.com/.../disney_store.html - Cached page - Mark as spam

Disney Store near Seattle, Washington - Bing Local - Change location

1. Disney Store - Website - (425) 451-9300
172 Bellevue Sq - Bellevue - Directions - Mall Map

2. Disney Store - Website - (206) 241-9887
536 Southcenter Mall - Tukwila - Directions

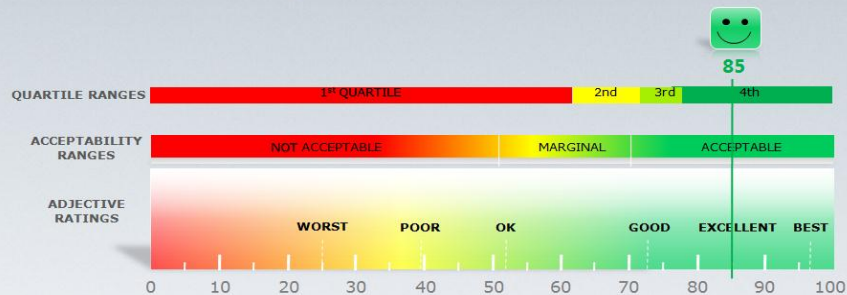
3. Disney Store - Website - (425) 744-9855
3000 184th St SW Ste 448 - Lynnwood - Directions

www.bing.com/local/default.aspx?what=disney+store&where=Seattle%2c+Washington&s_ci...

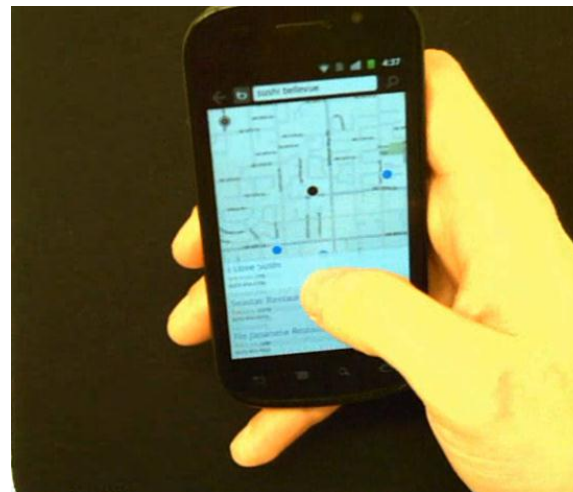
Seattle Disney Stores - Disney World Information: ...
Here you'll find a Disney Store in Seattle near you
www.dwiner.com/store-locator/Washington/Seattle/... - Cached page - Mark as spam

Disney Store | Official Site for Disney Merchandise
The online Disney Store is the official site for Disney shopping. Get the best deals on Disney merchandise including, Disney toys, electronics, home and ...
www.disneystore.com - Mark as spam

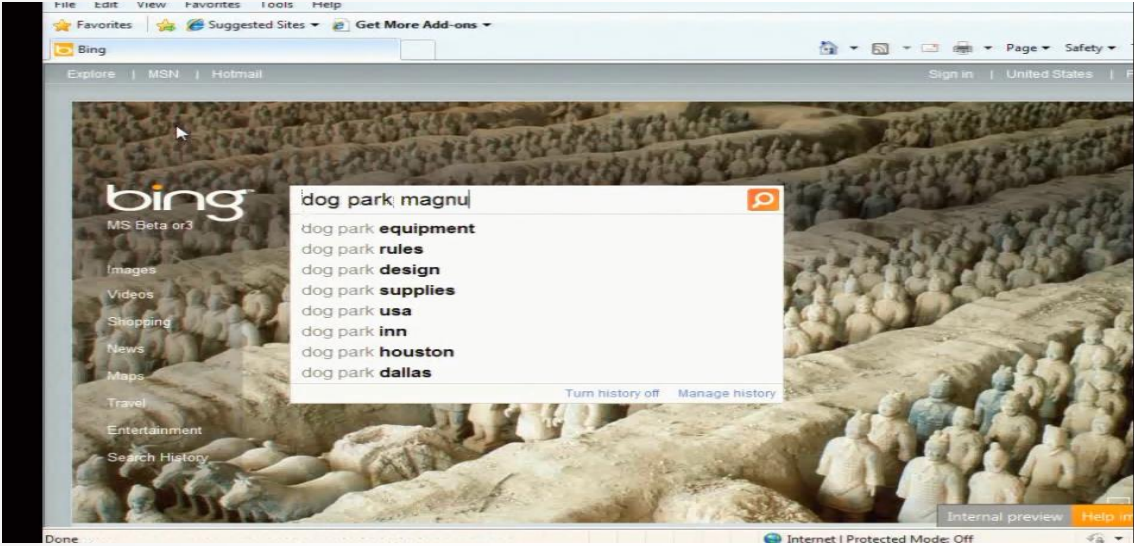
User Perception Results: SUS Score



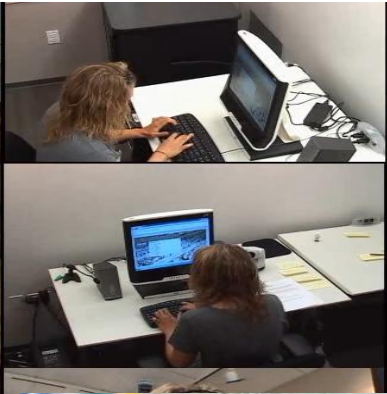
- The System Usability Scale (SUS) measures the *utility* of the system



Quick Pulse Study Step 4 – Communication



Exploratory Search Exercise



Eye Tracking Study



Quick Pulse Study Step 4 – Communication



Quick Pulse Findings

January 20th 2011 | Conducted by Renuka Abayanayaka

Topic: **Bing Shopping, Auto-suggest Facets**
PM: Cornelia Carapea | Design: Gautam Satalkar

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?fdsetremotehost=commux-demo1&treatment=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.



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 related auto-suggestions, participants understood and appreciated the differences, as quoted below.

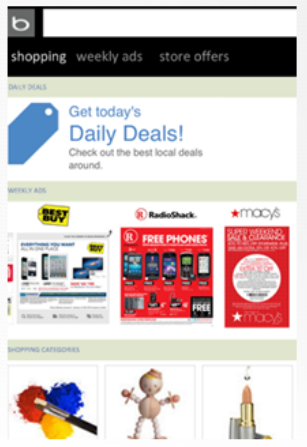
- "I learned that orange tells me this is not a specific link...opportunity for, example."
- The black ones are limited to exactly what it says there.
- I like the orange so much I am not sure I will use the black to be hone the stuff on the right (facets menu), the orange ones became intuitive
- Now, the separate blacks are confusing: not sure why the black ones above and below the orange links in the auto-suggest list; I didn't even stuff down here."

Tapes
Tapes for studies can be viewed here (for best quality, copy locally).
http://utnetshow/24601_24250/24048/8BRV_05E2/01202011/Tapes

A brief Presentation to immediate team

Weekly Ads: Key Takeaways

- Shopping Splash Page A/B Comparison
 - The reactions to whether the shopping splash page should have just the logos or logos and thumbnails of the weekly ads were mixed: Thumbnails were clearer what it represented, logos made for a cleaner look. However, with the logos only there seemed to be some confusion if the categories below were part of the weekly ads.
 - Additionally, there was some commenting on the Daily Deals banner: it wasn't flashy, people could guess what it was but it wasn't abundantly clear, there aren't as many images as there were in the other sections. This combined with the small headers for "Daily Deal," "Weekly Ad," and "Categories" made it a little unclear what was what. Having a banner with appropriate imagery for daily deals and using the weekly ad thumbnails would make it much clearer that these are their own category.



Quick Summary Findings by email

Quick Pulse Study Application

✓ Works well with...

- Sprint-specific work
- Smaller/ Simpler features
- Sprint demos
- Quick UI fixes w/wireframes
- Simple UI navigations
- Simple scenarios
- Paper prototypes
- Product Concept mockup

✗ Doesn't work well with...

- Method requires large N sample
 - Card Sort study
 - Benchmark studies
 - Competitive Analysis
 - Surveys
- Method requires strategic insights
 - Long-term/ E2E scenarios
 - Complex Systems / navigations
 - International Studies

FAQ: Quick Pulse Study

- What if....we don't have a UX Researcher?
 - ✓ Scrum Product Owner could run it, if not hire a UX researcher
- What if....we don't have a usability lab?
 - ✓ You can use online- meetings, conference rooms, at the coffee shops, at the conferences

FAQ: Quick Pulse Study

- What if....we don't have enough budget to recruit ever week?
 - ✓ You can ask **volunteer customers** through company website, social media
- What if....we don't believe usability study data?
 - ✓ I'll personally come to your company and educate your team 😊

Q&A: Quick Pulse Study

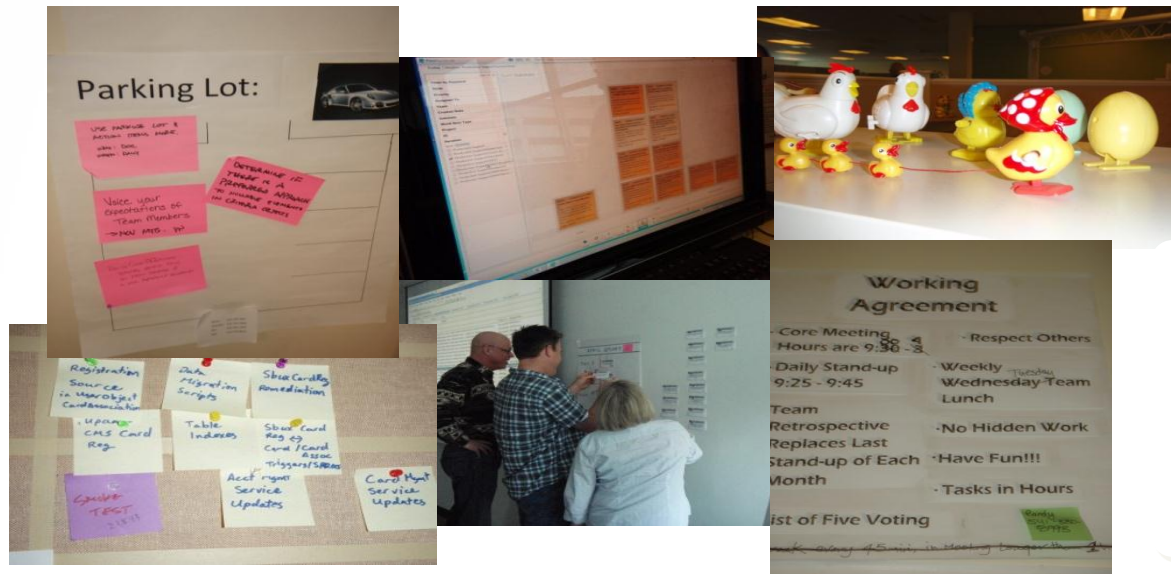
- Any more questions on Quick Pulse Study?



Agile UX Research Processes

4. Team Involvements with Personas

- Persona Creation
- Field Site Visits – take team members to visit real users in their real environments
- Persona Happy hour - Bring the real users (persona profiles) in on Friday afternoon
 - A great way to get to know the target users in an informal setting with snacks & drinks



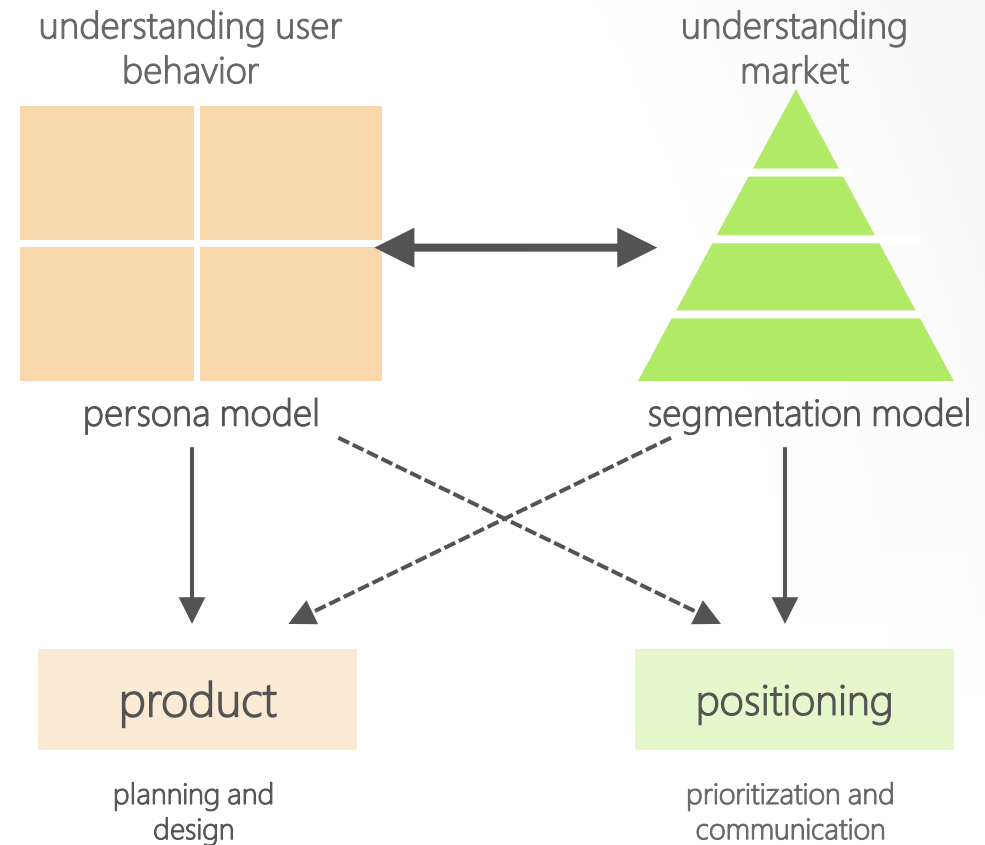
Persona Creation

- What is persona?
 - Personas are **concrete representations based on the *real data***
 - Personas are **not every possible customer**
 - Different from customer segmentations from marketing
- What are the benefits?
 - Bring **focus**
 - Build **empathy**
 - Encourage **consensus**
 - Help **prioritize features**
 - Lead to **better customer-focused decisions**
 - Focus on **important customer-focused scenarios**



Persona – Segmentation Mapping

- **Market data** = knowing why and **how someone buys** products or services, affects market positioning
- **Behavioral data** = knowing **how someone uses** the products or services, affects design and feature decisions

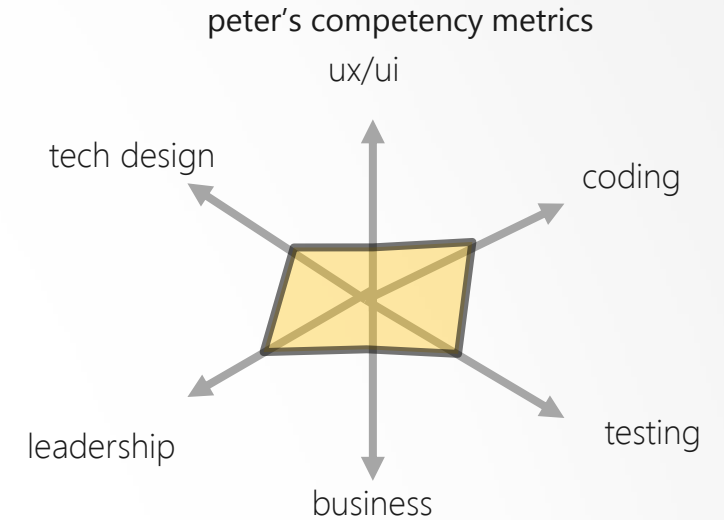


PETER AGILE SCRUM MASTER



WORK STYLE

- » collaborative
- » good negotiator
- » domain-expert
- » great listener
- » excellent facilitator
- » politically not savvy
- » gets excited about technology



PEOPLE

multifunctional roles (e.g., SM/Dev, SM/QA)
most have technical degrees (BS in CS)
most have CSM (certified scrum masters)
some evolved from developers or PMs
motivated by team productivity, shipping
customer-centric features

ACTIVITIES

run daily stand ups
remove team's blocking issues
manage team's velocity/ burndown
negotiate user stories with product owners
monitor sprint goals, run sprint review
coding/ testing

PAIN POINTS

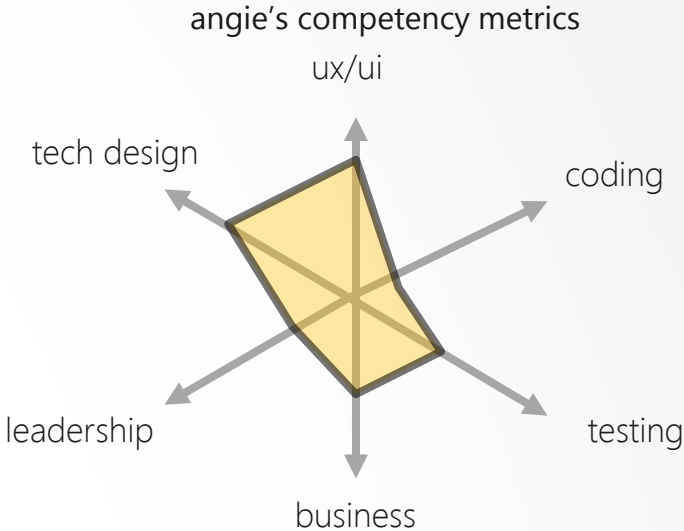
unable to resolve team's impediments
time management between SM & dev
work rejected by product owners
not get recognized being Scrum Master
making time for mentoring junior devs
process interrupted by mgrs

ANGIE AGILE PRODUCT OWNER



WORK STYLE

- » excellent negotiator
- » collaborative
- » detailed oriented
- » great listener
- » excellent facilitator
- » understand customer values
- » extremely organized

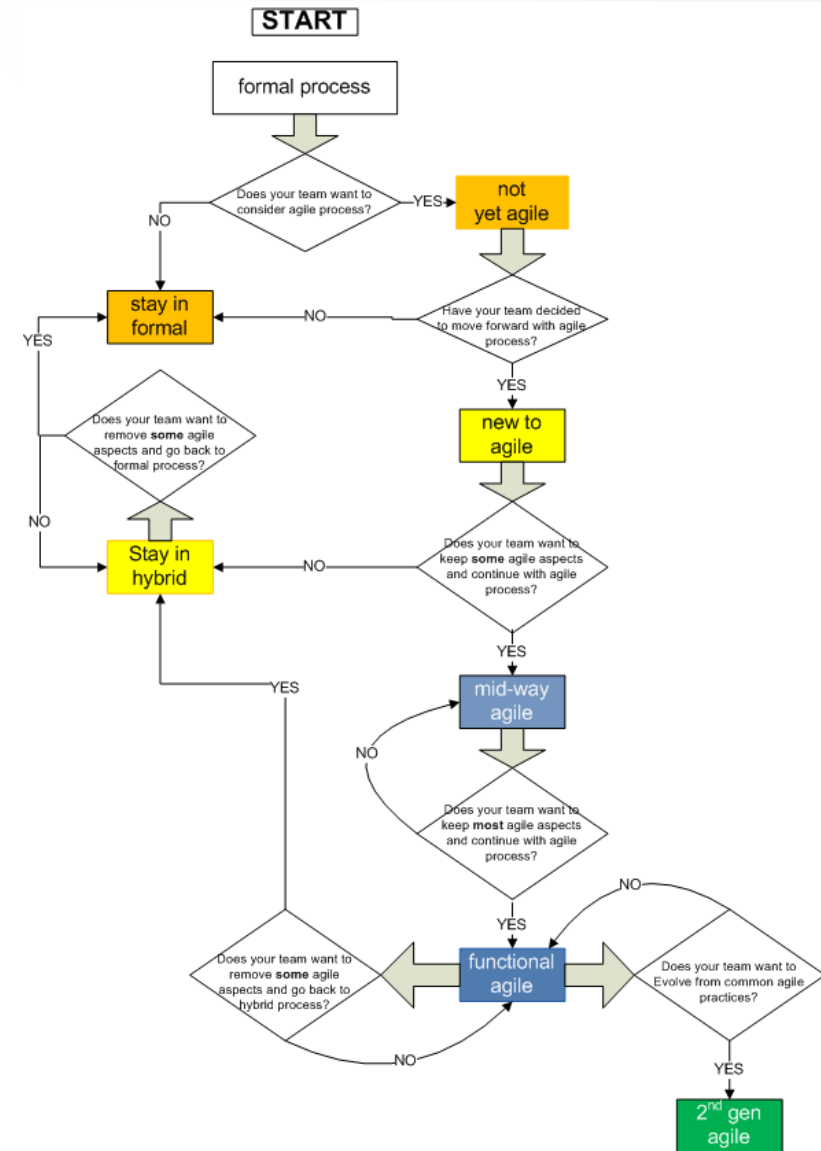
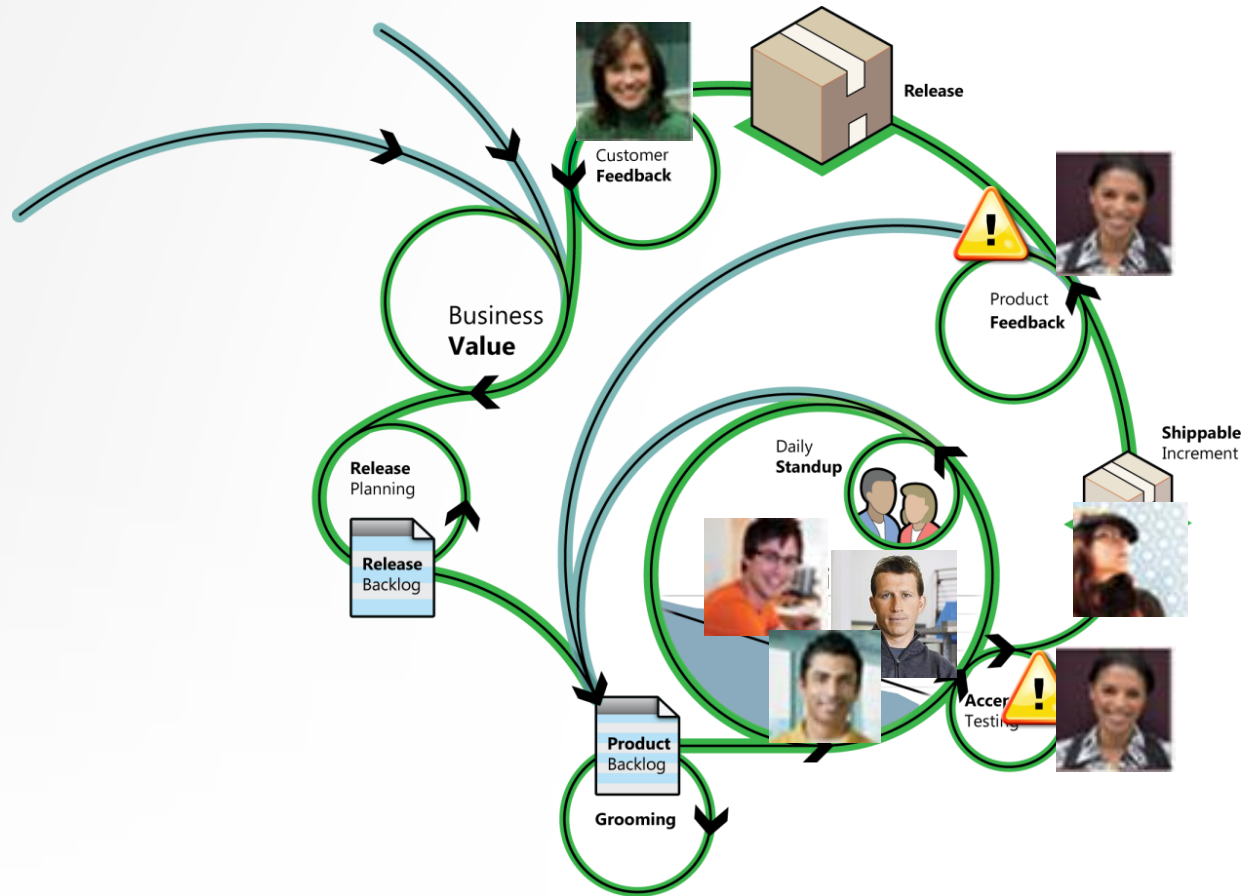


PEOPLE
focused but hybrid role with Dev, UX, or BA
variety of degrees (CS, UX, or BA)
some used to be a business analyst
some have PO training such as CSPO
motivated by seeing features from her user stories, seeing backlog items reducing

ACTIVITIES
manage product and sprint backlogs
collect biz, functional, tech customer reqs
create user scenarios & storyboards
lead sprint planning/play planning poker
define & clarify user story with the dev team
set an acceptance criteria

PAIN POINTS
manage backlogs with multiple tools
not able to clarify user stories to the team
not able to validate user stories with cus
not able to estimate the user stories correctly
req artifacts are not linked well together
not able to transition well from previous roles

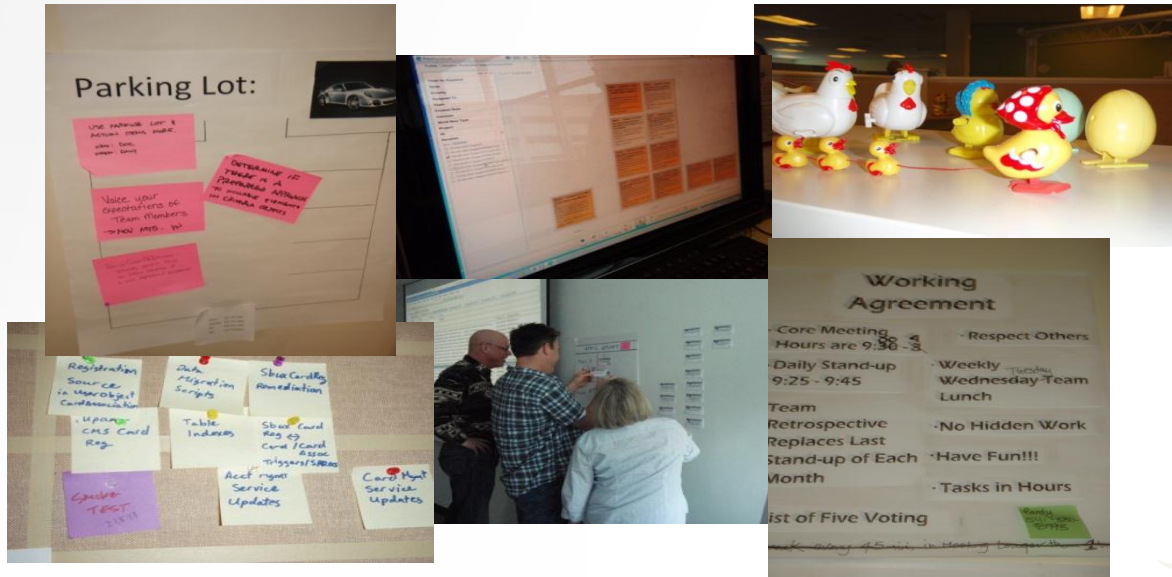
Team Personas Creation



Field Site Visits

- Field Site Visits
 - Take team members to visit real target users (personas) in their real environments

Collection of evidences from site visits



Affinity Diagrams to organize the insights



Persona Happy Hour

- **Persona Happy hour** - Bring the real users (personas) in for Friday afternoon
 - A great way to get to know the target users in an informal setting with snacks & drinks



Q&A

Please contact mkonno@microsoft.com for any further questions