Overview

- Do you have a long list of user stories and have trouble organizing and prioritizing them?
- Want a better way to track dependencies between stories?
- Do you find it tedious to write “As a user” over and over?
- Do you find that some stories impact more than a single user type and need a way to track that?
- Want to figure out how to measure the UX impact of backlog items?
- Want to track UX work like wireframes, mockups, or user testing more effectively?
- Just want to learn more about UX and how to integrate it into Scrum?
Agile & UX Integration Challenges

• **Working code is not enough to create a good UX**
  - UX produces deliverables of value other than code
  - UX deliverables are used in many parts of the company

• **UX changes can impact lots of teams, creating chaos**
  - UX deliverables often get used by many teams outside of developers

• **UX work may require longer term plans or sequencing**
  - User studies may need to be done a sprint ahead or behind
  - User research may take longer than a sprint to complete end to end

• **UX staffing often breaks “self contained team” rule**
  - Due to the variety of specialized skills it may be necessary to matrix
  - Some skills needed infrequently, but experience is key to success
UX & Agile Meet

http://www.flickr.com/photos/dearbarbz365/2196169411/in/photostream
Compatibility of Agile and UX Values

1. Individuals and interactions vs. Process and tools
2. Working software vs. Comprehensive documentation
3. Customer collaboration vs. Contract negotiation
4. Responding to change vs. Following a plan

Agile info based on www.agilemanifesto.org & www.mountaingoatsoftware.com
User Experience—A Brief Definition

It starts by something being **useful**…

Functionally, people must be able to use it…

The way it **looks** must be **pleasing**…

This extends to designing an overall **user experience**

That includes **marketing**, **sales** and **support design**

---

Executing well on all of these areas is what creates a great user experience
Four Categories of UX Problems

**Acquire**
- Marketing oriented, get user to know offering exists

**Activate**
- Get user to engage with product for initial 1st use

**Retain**
- Get user to integrate offering into their lives and use long term

**Refer**
- Get user to recommend to a friend

These apply to any type of product or service AND includes more than product design activities

UX Means Integrated Research & Design

Research

Design
Six Key UX Activities for Software

Activities listed based on Norman: The Invisible computer, 1998
UX Organizational Integration Points

Information Architecture

Interaction Design

Usability Testing

Visual Design

Concept Prototyping

Quality Assurance

Technical Writing

Market Research

Field Studies

Project Planning

Product Management

Brand Strategy

Advertising

Sales

Technical Support

Engineering

SM
Figure 1: Three Iterative, UCD Phases
Understand Users, Define Interaction, and Design UI

Managing UCD within agile projects. Detweiler, 2007
Our guiding principle is that design is neither an intellectual nor a material affair, but simply an integral part of the stuff of life, necessary for everyone in a civilized society.

http://www.flickr.com/photos/udanium/290748501/
AGILE DEVELOPMENT

http://en.wikipedia.org/wiki/Agile_software_development
Changes Via Values and Visibility

• **New Values: UX Matters, Involve Users**
  - Involve users early and often
  - Waiting until the end is the waterfall way
  - The definition of “done” can only be determined by users

• **More Visibility: Tracking via UXI Matrix**
  - Track UX deliverables—who’s doing what?
  - Have we validated our stories with users?
  - Did the iteration feedback include user feedback?
    - Can they use it? Do they like it? Would they recommend it?
  - Is the UX getting better? What are we doing about it?
# UXI Matrix™

**List Users**

1. List Users
2. List Stories
3. Groom
4. Estimate
5. Assign
6a. Track
6b. Bonus: Add hyperlinks to deliverables

<table>
<thead>
<tr>
<th>Acquire Theme</th>
<th>Target Personas</th>
<th>Estimating</th>
<th>Tracking</th>
<th>Staffing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persona A</td>
<td>Persona B</td>
<td>Persona C</td>
<td>Persona N</td>
</tr>
<tr>
<td>User Story 1</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>User Story 2</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Story 3</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>User Story 4</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Story 5</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activate Theme</th>
<th>Target Personas</th>
<th>Estimating</th>
<th>Tracking</th>
<th>Staffing</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Story 6</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Story 7</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>User Story 8</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>User Story 9</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Story 10</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Persona Weight</th>
<th>Persona Validated</th>
<th># participated in usability testing</th>
<th>Task Completion Rates (Score)</th>
<th>SUS score for this persona</th>
<th>Net promoter score for this persona</th>
</tr>
</thead>
<tbody>
<tr>
<td>3  8  6  5</td>
<td>Y  Y  Y  Y</td>
<td>8  8  8  8</td>
<td>73% 81% 87% 78%</td>
<td>65% 80% 90% 85%</td>
<td>6.5 8.5 9 7.5</td>
</tr>
</tbody>
</table>
Common Questions & Answers

• Isn’t this just a product backlog?
  • Sort of, but with additional information
  • Start with your backlog and just build off of it

• How do I collect UX metrics?
  • See www.measuringux.com
  • Also consider just tracking what UX things you create

• What “design” metrics do you capture?
  • Start with do you have a design for the story
  • Consider tracking intermediate work like wireframes
  • Another good one is “do we have assets” (e.g., icons)
More Questions & Answers

• How does this relate to Patten’s Story Map stuff?
  • His technique is a great way to start
  • The UXI Matrix includes UX tracking and metrics

• Can I use something else other than Excel?
  • Sure, but I suggest you start simple

• Why not use sticky notes?
  • Teams I work with are distributed and like electronic stuff
  • The UXI Matrix has calculations on it, and hyperlinks
  • I can print it out or share it on a server
Story Map Example

**Figure 5:** The model is vertically divided into business processes.

**Figure 6:** The first system span represents the smallest set of features necessary to be minimally useful in a business context.

www.agileproductdesign.com/writing/how_you_slice_it.pdf
The UXI Matrix Explained

Using the UXI Matrix:
1. Identify personas and link to details
2. Enter use case names and link to details
3. Analyze dependencies in design work
4. Develop estimates based on impact analysis
5. Prioritize work and assignments with team
6. Link to work in progress and update status
7. Track impact on usability and sat metrics

Legend:
- UXI Matrix Steps
- Related Tasks
- Artifacts

An Operational Dashboard:
- Estimate & prioritize considering:
  - Development complexity
  - Development effort
  - Business Impact
- Detailed and summary views
- Assignments & status of work
- Impact on product usability
- Impact on customer satisfaction

Identify & Organize Use Cases

Identify Target Market & Users

Formative Usability Data

Product Requirements

Detailed Use Cases

Analyze Patterns

Swimlane Diagrams

UI Pattern Library

Define UI Details

Analyze Dependencies in Workflow & UI Patterns

Develop Estimates Based on Impact
Persona Example

Civil 3D Persona—Tom S Roades

Occupation/Role
Highway Design Engineer in medium sized civil engineering firm

Technical Skills
Advanced PC skills, XP/Vista, MS Office 2007, formal AutoCAD training. Holds a Civil Engineering degree with extensive drafting training in college. Two years experience working at a local government highway authority.

Style
Introverted when problem solving, but likes talking to others about things like Civil engineering and technology. Focused, but lacks patience, wants immediate gratification and results.

Gear
• Dual Core Pentium Vista Workstation with 21” LCD display
• Blackberry Storm (to track emails and appointments)

Pain Points
Getting too involved in menial tasks related to drawing production. Spending too much time teaching others how to use Civil 3D. Becoming more involved in client meetings prevents him from focusing on “pure engineering work”

Values
Accuracy is everything, likes automated tools, but wants to verify calculations and check things against field data or other sources. Wants to feel like he is using the latest technology. Likes standards both in technology and engineering practices.

Key Use Cases
UC 1.1 Viewing and editing superelevation data
UC 2.4 Designing and creating sections
UC 3.1 Designing Intersections and roundabouts
UC 4 Setting up data for corridor creation
UC 5 Analyzing surfaces such as depressions, slopes, elevations and watersheds
UC 6 Defining grading criteria and analyzing results
UC 7 Designing and editing alignments
UC 8 Reviewing parcels provided by GIS team
UC 9 Material and quantity analysis
UC 10 Analyzing sectional volumes

Related User Research
Formative Research 2010
Civil 3D Benchmark Study 2009
Civil Usability Study 2010

Average Task Completion Rate = 70%
System Usability Score = 65
Net Promoter Score = 7.5
Experience Rating = At Risk
UX & Agile Meet

http://www.flickr.com/photos/dearbarbz365/2196169411/in/photostream