AGILE REQUIREMENTS
First things first

INTRODUCTIONS
A Quick Introduction

- Co-Author of “Becoming Agile”
- Executive Vice President at Santeon
- Over 10 years of dev and delivery experience
- Co-founder of International Consortium for Agile
- Masters in Requirements Engineering
- Ph.D in Agile Adoption from Virginia Tech
- Agile Educator, Coach and Consultant
- Frequent Presenter at Conferences
- Program Chair of Agile 2009
How the customer explained it
How the Project Leader understood it
How the Analyst designed it
How the Programmer wrote it
How the Business Consultant described it

How the project was documented
What operations installed
How the customer was billed
How it was supported
What the customer really needed
Dr. Winston W. Royce
The Waterfall Model

"I believe in this concept, but the implementation described above is risky and invites failure."

We wish were true
The customer knows *exactly* what they want
The developers know exactly how to build it
Nothing will change along the way

We have to live with
The customer discovers what they want
The developers discover how to build it
Many things change along the way
Be the customer ... just for a minute
Feature Usage

Source: Jim Johnson of the Standish Group, Keynote Speech XP 2002
We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

That is, while there is value in the items on the right, **we value the items on the left more.**
Agile in a word

Agile is a mindset defined by values guided by principles and manifested through many different practices.
What is Agile

Agile is a mindset defined by values and manifested through many different practices.

The Agile Mindset:
- Responding to Change
- Build and Feedback
- Welcoming Change
- Continuous Delivery
- Value-Driven
- Small value-add slices
Read the Case Study
PERSONAS

Pre-Production >> The Product Backlog
Personas Are More Than Actors

- Personas represent real people
- Personas are being used by others
  - (interaction designers - marketing)
  - *keep them simple and visible*
- Personas clarify product value
- *Let’s create some personas …*
Simple (emerging) Personas

- Michelle the Trust Assistant
  - data entry for creating trust account
  - overflow office

- Kathie the Office
  - makes sales
  - gathers custom (trust account) into

- Frank the Lead of New Accounts
  - validation of new accounts
  - ensure account open completion

- Denise the Trust Center Manager

Michigan
New Jersey
Long Beach
### Detailed Personas

#### Petey the Public Prospect

<table>
<thead>
<tr>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interested in the AIM3 story</td>
<td>Reference points - Stories</td>
</tr>
<tr>
<td>Curious</td>
<td>Educational information need</td>
</tr>
</tbody>
</table>

**Important Facts:**
- Could be a competitor
- Count be the next top producer

#### Albert the Agent

<table>
<thead>
<tr>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driven by business and getting commissions</td>
<td>Visited interest in AIM3 being successful due to social networking</td>
</tr>
<tr>
<td>Typically male, around 36</td>
<td>Visibility into pending business</td>
</tr>
<tr>
<td>Financial Planner, motivated to trips and parties</td>
<td>Ease of doing business with senior executive partners or more money</td>
</tr>
</tbody>
</table>

**Important Facts:**
- Potentially 180,000 Alberta

#### Gary the Income Guru

<table>
<thead>
<tr>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experts in the Retirement Income Market</td>
<td>Helps agents close business</td>
</tr>
<tr>
<td>Takes the income story to agents and brokers</td>
<td>Helps agents close business</td>
</tr>
<tr>
<td>Humorous illustrations and quotes for agents</td>
<td>Helps agents close business</td>
</tr>
<tr>
<td>Story tellers / Communicators</td>
<td>Helps agents close business</td>
</tr>
</tbody>
</table>

**Important Facts:**
- Jack of all trades, one stop, they know the pain points

#### Frank the Field Marketing Org

<table>
<thead>
<tr>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides field training Phillips helps to agents</td>
<td>Access to information on how agents are doing</td>
</tr>
<tr>
<td>Phillips is independent, will go where they want to do the work</td>
<td>Growth - Easier ways of doing business</td>
</tr>
<tr>
<td>Focused on product</td>
<td>Ability to fill some of the work for the agent (improver)</td>
</tr>
</tbody>
</table>

**Important Facts:**
- Will steer business to the “best” place in town to do business

#### Polly Production Partner

<table>
<thead>
<tr>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do we service the once of experience for Frank and Albert</td>
<td>Ability to see the business from Calen’s objectives before they see it</td>
</tr>
<tr>
<td>How do these roles play into exception handling</td>
<td>Visibility to see view of agent that they are talking to (degree level of agent)</td>
</tr>
<tr>
<td>High Customer Satisfaction</td>
<td>Help agents see the business from Calen’s objectives before they see it</td>
</tr>
</tbody>
</table>

**Important Facts:**
- Jack of all trades, one stop, they know the pain points
Meet Mayumi

The Brand Representative

Typical day
Mayumi makes sure her desk is organized and presentable for customers—she’s the first contact customers have with the WaMu Brand. The doors open to the public and she begins her day assisting customers and making service calls.

Building relationships with WaMu customers is important so they will come back for their future banking needs.

On breaks, she goes to the back workroom and checks her e-mail and reports her time. She checks her e-mail on Webmail and after reading the Words to Bank By message, she’ll read the articles related to her job.

In between customers, Mayumi works on servicing accounts and loans. Should issues surface when a customer is working with a teller, they will refer the customer to her and she’ll resolve their issue.

Communication

Online: Uses IM, the intranet and e-mail throughout the day. Most of the day is spent using VB and HOST when conducting customer transactions.

Offline: Customer service throughout the day; uses the telephone for cold calls to generate business. Network is created mostly by face-to-face personal interactions mostly within the FC with a few contacts in other departments.

Common tools

• WaMu.net: Guide Online, Manager Dashboard, Report My Time, Referral Management System, My Place, Webmail
• Specialized Applications: Visual Banker, FC Web, FC Dashboard, HOST, FONE

Goals
• Keep “The Line” down
• Meet checking account and referral goals
• Assist Tellers when needed
• Balance work with the rest of her busy social life
• Keeps her eye out for continuing education opportunities to build her knowledge of banking skills
• Move up the corporate ladder to become an FC Manager or Loan Consultant

For Internal Use Only
Different Categories of Personas
Java++ Case Study

User Roles
- Online Customer
- Sandwich Maker
- Delivery Guy
- Owner

Personas
- Persona A
- Persona B
- Sam the Sandwich Maker
- Doug the Delivery Guy

Tuesday, April 5, 2011
USER STORIES

“I find that most people know what a story is until they sit down to write one.”

– Flannery O'Connor
Requirements

- Think, Think, Think … Then write requirements
- Powerful feedback loop when users see the software being built for them
- Seeing the software leads to new ideas and changing their minds – “Change of scope”? 
- “Change of scope” mentality - implies that the system was well-known before
- FACT: Users will have a different opinion once they see the software
Classical Requirements

- IEEE 830 Standard “The system shall…”
- Boring to Read (…not thoroughly read by everyone)
- Hard / Impossible to grasp the big picture
- Software is complete when it fulfills the list of requirements – rather than its intended user goals.
Requirements as system attributes

3.4) The product shall have a gasoline-powered engine
3.5) The product shall have 4 wheels
   3.5.1) The product shall have a rubber tire mounted to each wheel
3.6) The product shall have a steering wheel
3.7) The product shall have a steel body

Research suggests that designers “may produce a solution for only the first few of requirements they encounter”
Requirements as User Goals

- The product makes it easy and fast for me to mow my lawn
- I am comfortable while using the product

Stories describe user goals
User Story

• A planning tool
• Contract to communicate
• From the user (not the system) perspective
• Agile Principle: “The most efficient and effective method of conveying information to and within a development team is face-to-face conversation”
• User Stories have just enough info for relative/quick estimates
• User Stories don’t have enough detail ... they are insufficient to implement without a conversation between the customer and delivery team
A User Story “is not” …

- A technical specification
- A complete - “detailed” - requirement
  - Which needs no discussion before to code
- Complete when coded
- An unchanging document buried in a tool
- A use case?

Tuesday, April 5, 2011
Quick Review of Use Cases

• Use cases are a generalized description of a set of interactions between the system and one or more actors.
• Use cases can be written as unstructured text or to conform with a structured template.
• Uses cases IF written correctly express business value.
• Main Success Scenario: description of the primary successful path.
• Extention Scenarios: Error Handling + Secondary Paths.
User Stories VS Use Cases

A story **may be** similar to a single scenario of a use case

**USER STORY**
- Small in Scope because we use it for scheduling
- Insufficient to implement without conversation
- Initiates a conversation between customer and delivery team
- Written as notes to initiate analysis conversations

**USE CASES**
- Large in Scope
- Complete definition of user scenarios
- Defines contract between customer and delivery team
- Usually a result of an analysis activity
Constantine and Lockwood (1999) suggested the use of essential use cases. Stripped of hidden assumptions about technology and implementation.

<table>
<thead>
<tr>
<th>User Intention</th>
<th>System Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compose Email Message</td>
<td></td>
</tr>
<tr>
<td>Indicate Recipient</td>
<td>Collect email content and recipient (s)</td>
</tr>
<tr>
<td>Send the email message</td>
<td>Send the message</td>
</tr>
</tbody>
</table>

User Intentions could be directly interpreted as user stories.
A User Story “is” …

A description of desired functionality from the perspective of the user or the customer

- Reserve a hotel room
- Cancel a Reservation
- See photos of the Hotel
A Common User Story Template

Story Title

As a <type of user> I <want to> <can> <immediate goal> so that <business outcome>

Who?
What?
Why?
Check Price

As a cashier I want to check the price of an item quickly so that I can answer customer's questions about product price
A Common User Story Template

In order to <value> the <role> [verb] <task>

Story Title

Who ?

What ?

Why ?
Check Price

In order to answer the customer’s questions about product price the Cashier checks the price of a product.
The product backlog iceberg

- Iteration
- Release
- Future Releases

Priority
Sizes of User Stories

Key Characteristics

- High-level descriptions of desired functionality and goals
- Implement “vertical slices” of the system’s functionality
- “Contracts for conversation,” not all-inclusive requirements
- User stories wait in the Product Backlog until pulled into the Iteration Backlog
- Contain Acceptance Criteria to define “Done”

Allow a new customer to create an account
Estimate: Large

Allow a new customer to enter personal information
Estimate: 5 Pts

Allow a new customer to enter billing information
Estimate: 13 Pts

Product Backlog User Story

Iteration User Story

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Work in Agile projects is organized by Units of Value, rather than by Architectural Layer.
Details as Acceptance Criteria

Cancel a Reservation

The product owner’s conditions of satisfaction can be added to a story:

- Verify that premium members can cancel the same day without a fee.
- Verify that non-premium members are charged 10% for same day cancellations.
- Verify that an email confirmation is sent.
- Verify that the hotel is notified of any cancellation.

These are essentially tests.
Details added in smaller stories

Cancel a Reservation

- Cancel reservations up to last minute for premium members
- Cancel reservations up to 24 hours in advance for regular members
- Send confirmation email for any canceled reservation
Attributes of Good Stories

• Independent (Dependencies reduce agility)
• Negotiable (Negotiation breeds collaboration)
• Valuable (Valuable to the product owner)
• Estimatable (Stories are planning tools)
• Sized appropriately (predictably delivered)
• Testable (acceptance tests define “done”)
Attributes of a Good Story

- **Independent**
  - Dependencies lead to problems estimating and prioritizing
  - Can ideally select a story to work on without pulling in 18 other stories

- **Negotiable**
  - Stories are not contracts
  - Leave or imply some flexibility

- **Valuable**
  - To users or customers, not developers
  - Rewrite developer stories to reflect value to users or customers
Attributes of a good story

• **Estimatable**
  - Because plans are based on user stories, we need to be able to estimate them

• **Sized appropriately**
  - Small enough to complete in one iteration if you’re about to work on it
  - Bigger if further off on the horizon

• **Testable**
  - Testable so that you have an easy, binary way of knowing whether a story is finished
  - Done or not done; no ”partially finished” or ”done except”
What’s Next ...

Learn more about Agile
Upcoming Trainings...
Fundamentals of Agile Certification : April 12 -14
Agile and CMMI : April 26 – 28
Facilitation Skills for Agile : May 3 - 5
Fundamentals of Agile Certification : May 10 -12

Agile Coaching and Consulting
Agile Readiness Assessments
Simple Version : www.doctoragile.com
Expanded Version : contact us : asidky@santeon.com
Did you learn something new?

I hope you enjoyed the class, ... I would appreciate if you leave me a recommendation on LinkedIn

Ahmed Sidky
asidky@santeon.com

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