

# 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



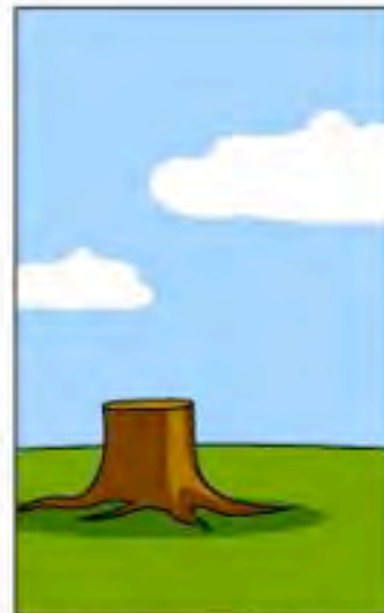
How the project was documented



What operations installed



How the customer was billed



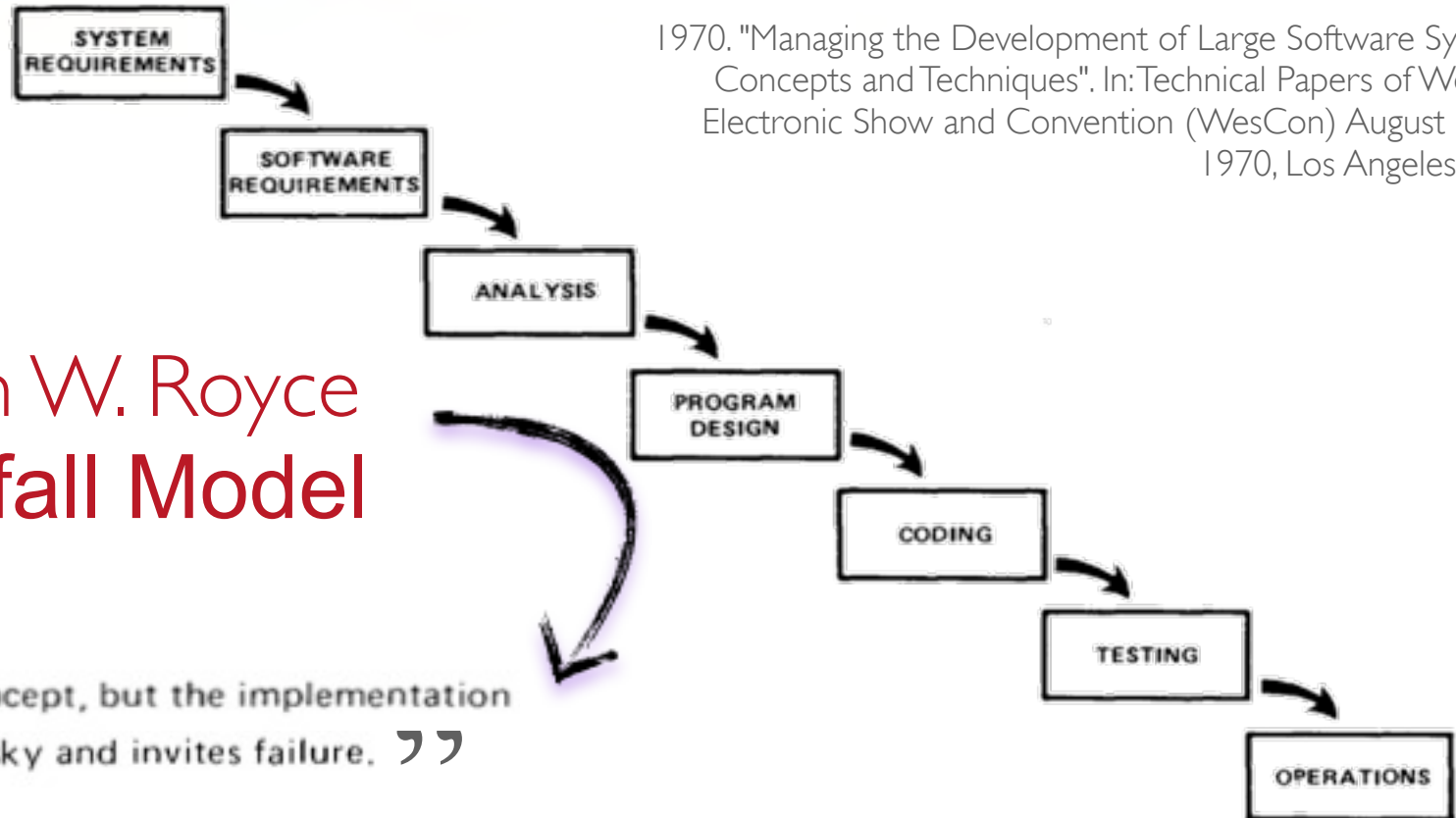
How it was supported



What the customer really needed



# Looks Familiar ?



1970. "Managing the Development of Large Software Systems: Concepts and Techniques". In: Technical Papers of Western Electronic Show and Convention (WesCon) August 25-28, 1970, Los Angeles, USA.

## Dr. Winston W. Royce The Waterfall Model

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

# 3 Things ...

## 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

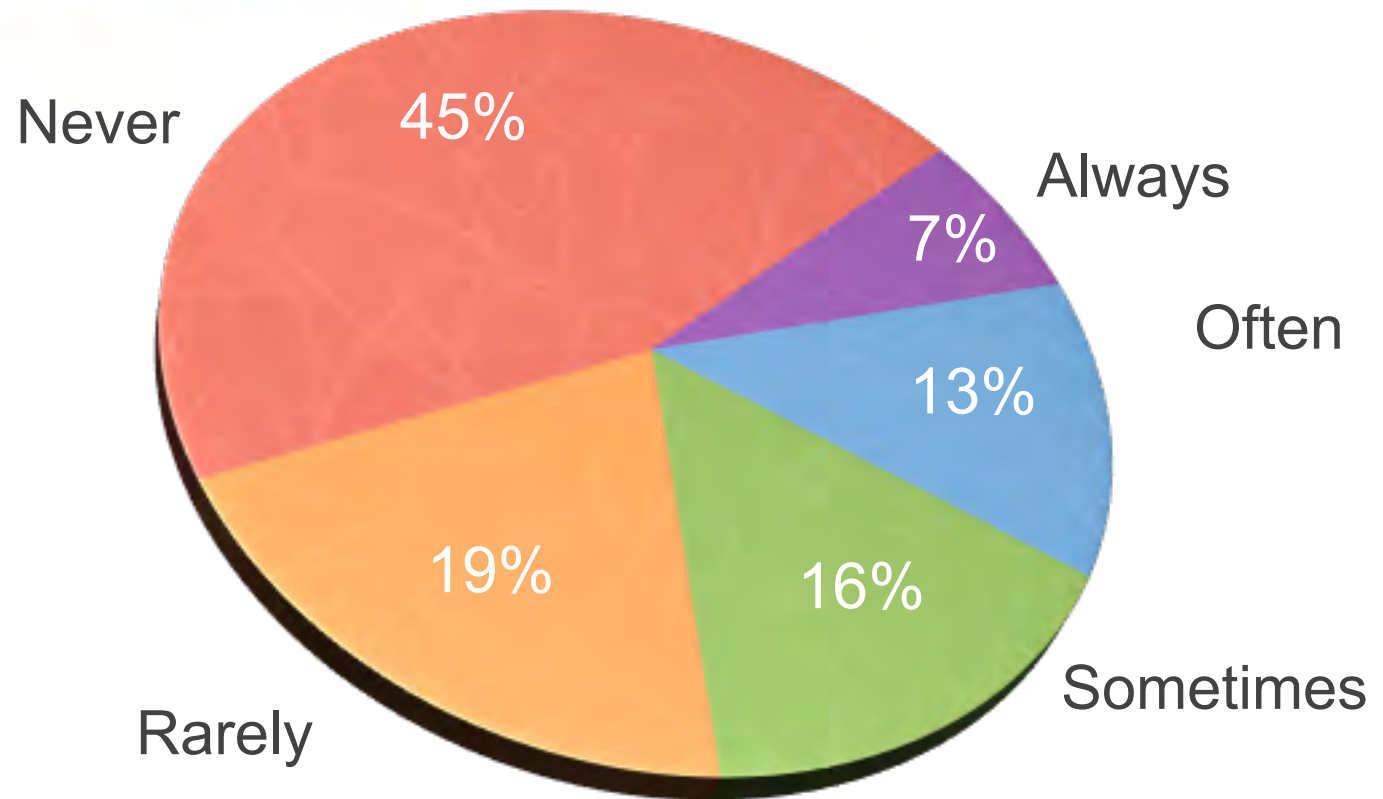
The developers discover how to build it

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



# 2001: The Agile Manifesto (Agile Values)

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 ◇ guided by principles ▲ 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



Pre-Production >> The Product Backlog

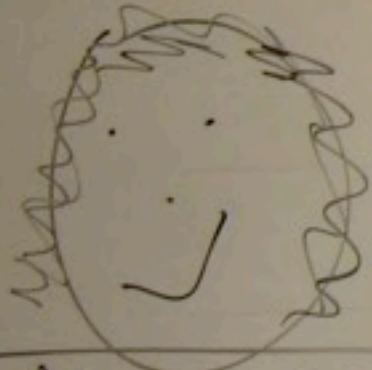
# PERSONAS



# 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 ...*

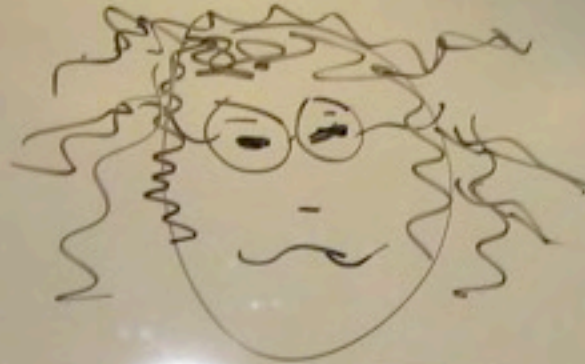
MICHIGAN



Michelle the Trust Assistant

- data entry for creating trust account
- overflow office

NEW JERSEY



Kathy the Officer

- makes sales
- gathers custom info

LONG BEACH



Frank the Lead of New Accounts

- validation of new accounts
- ensure account open completion



Denise the Trust Center Manager

- ?
- 

# Simple (emerging) Personas



### "Petey the Public Prospect"

Description	Values
<ul style="list-style-type: none"> <li>-Interested in the AIMS story</li> <li>-Curious</li> <li>-Potential Agent or Policyholder</li> <li>-General information</li> <li>-Why do I care about income market</li> </ul>	<ul style="list-style-type: none"> <li>-Reference points / Stories</li> <li>-Educational information</li> <li>-Help</li> </ul>

**Important Facts:**

- Could be a competitor
- Could be the next top producer



### "Aimee the Admin"

Description	Values
<ul style="list-style-type: none"> <li>-User account administration</li> <li>-End User Support</li> </ul>	<ul style="list-style-type: none"> <li>-Consistency in user name usage / BSO</li> </ul>

**Important Facts:**

- Maybe spread across multiple people



### "Albert the Agent"

Description	Values
<ul style="list-style-type: none"> <li>-Driven by business and getting commissions</li> <li>-Typically male, around 50</li> <li>-Financial Planner</li> <li>-Motivated by Tips and Perks</li> <li>-Not overly computer savvy</li> </ul>	<ul style="list-style-type: none"> <li>-Wanted interest in AIMS being successful due to stock ownership</li> <li>-Ability into pending business</li> <li>-Access to commission information</li> <li>-Ease of doing business with carrier</li> <li>-Faster easier companies drive more money</li> </ul>

**Important Facts:**

- Potentially 180,000 Alberts



### "Gary the Income Guru"

Description	Values
<ul style="list-style-type: none"> <li>-Experts in the Retirement Income Market</li> <li>-Tells the Income Story to agents and FMCs</li> <li>-Runs illustrations and quotes for agents</li> <li>-Story tellers / Communicators</li> <li>-Trainers</li> </ul>	<ul style="list-style-type: none"> <li>-Helping agents close business</li> </ul>

**Important Facts:**

- Jack of all trades, one stop, they know the pain points



### "Frank the Field Marketing Org"

Description	Values
<ul style="list-style-type: none"> <li>-Provides Sales Training</li> <li>-Recruits agents</li> <li>-Works with other Carriers</li> <li>-Is independent, will go where they see the most business</li> <li>-Focused on products</li> <li>-Provides support to agents</li> </ul>	<ul style="list-style-type: none"> <li>-Access to information on how agents are doing</li> <li>-Quicker / Easier ways of doing business</li> <li>-Ability to "do" some of the work for the agent (preparation)</li> </ul>

**Important Facts:**

- Will steer business to the "best" place in town to do business



### "Polly Production Partner"

Description	Values
<ul style="list-style-type: none"> <li>-One stop service experience for Frank and Albert</li> <li>-Vision State these folks will be exception handlers</li> <li>-Handles odd cases / exceptions</li> <li>-May be assigned to specific Franca and Alberts</li> <li>-Excited about the vision because it will make their lives better</li> </ul>	<ul style="list-style-type: none"> <li>-Ability to see the business flow</li> <li>-Catch exceptions before they become a Frank or Albert issue</li> <li>-Ability to see view of agent that they are talking to (360 degree view of agent)</li> <li>-High Customer Satisfaction</li> </ul>

**Important Facts:**

- Jack of all trades, one stop, they know the pain points

# Detailed Personas





# Meet Mayumi

## The Brand Representative

"I don't know what my day will consist of."

### General Info

Job Title: Personal Financial Representative  
 Demographic: 67% Female, over half non-Caucasian, average age: 23  
 Generation: Gen Y  
 Tenure: 51% have been with WaMu 1-5 years  
 Job Progression: Teller < PFR < AFCM < FCM  
 % of WaMu: 35% (Including Tellers & PFRs)

### Environment

Location: Financial Center  
 Workday Focus: Sales  
 Business Line: Retail  
 Social Network: Tribal

### 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

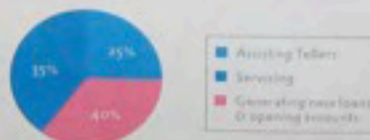
### Typical day

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.



During slow times, Mayumi works on tasks given to her by her manager Lori. These include pulling overdraft reports from Host and check copy requests from Vector. When needed, she'll order supplies for the store using Ariba or Market Now.

### 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

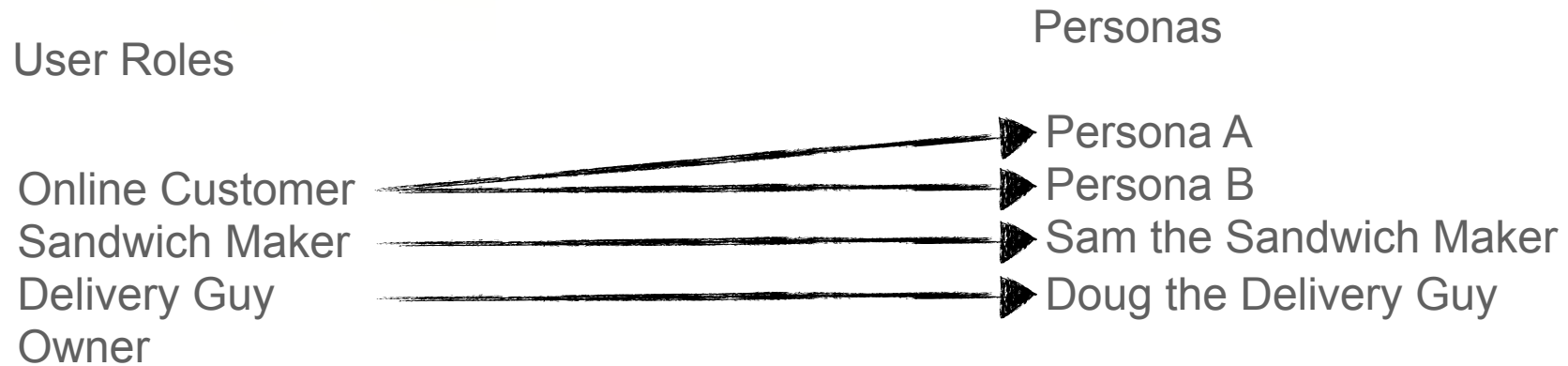
- **WaMu.net:** Guide Online, Manager Dashboard, Report My Time, Referral Management System, My Place, Webmail
- **Specialized Applications:** Visual Banker, FC Web, FC Dashboard, HOST, FONE



# Different Categories of Personas



# Java++ Case Study





# 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?

# 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



# Essential Use Cases

Constantine and Lockwood (1999) suggested the use of essential use cases. Stripped of hidden assumptions about technology and implementation

User Intention	System Responsibility
Compose Email Message	
Indicate Recipient	
	Collect email content and recipient (s)
Send the email message	
	Send the message

# 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

Who ?

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

What ?

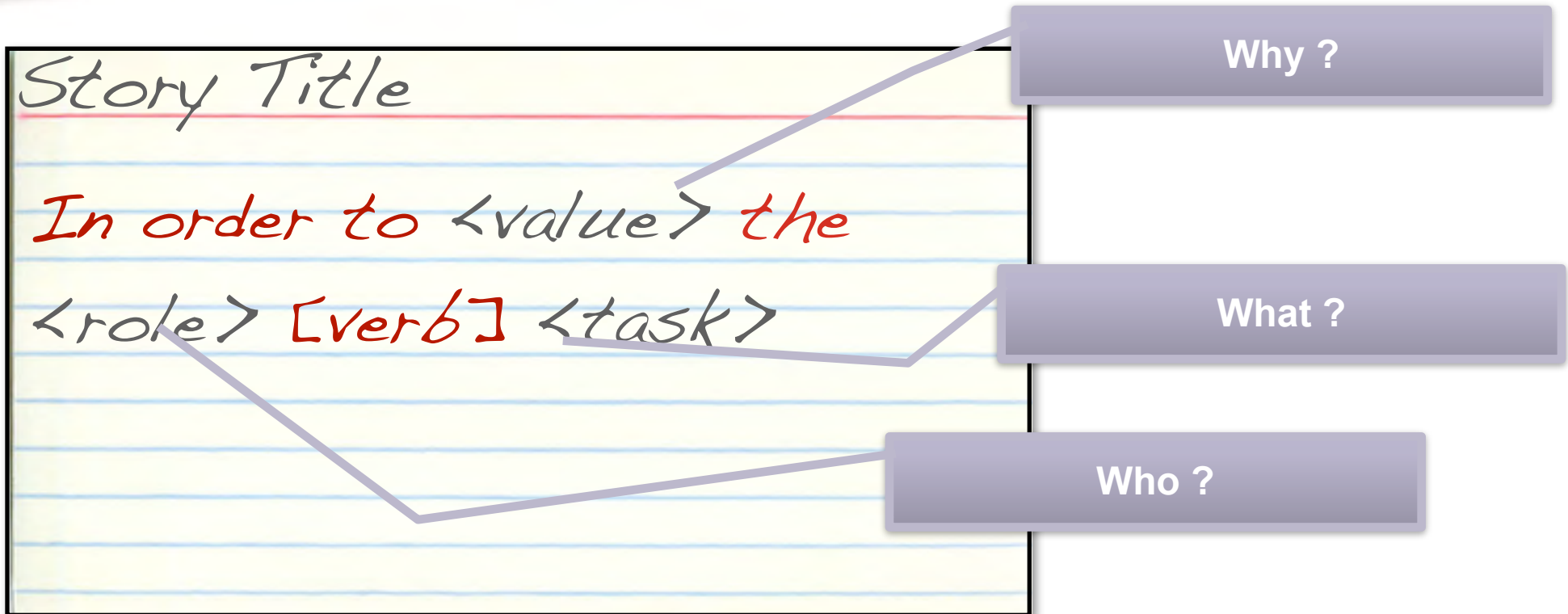
Why ?

# A Common User Story Template

## 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





# A Common User Story Template

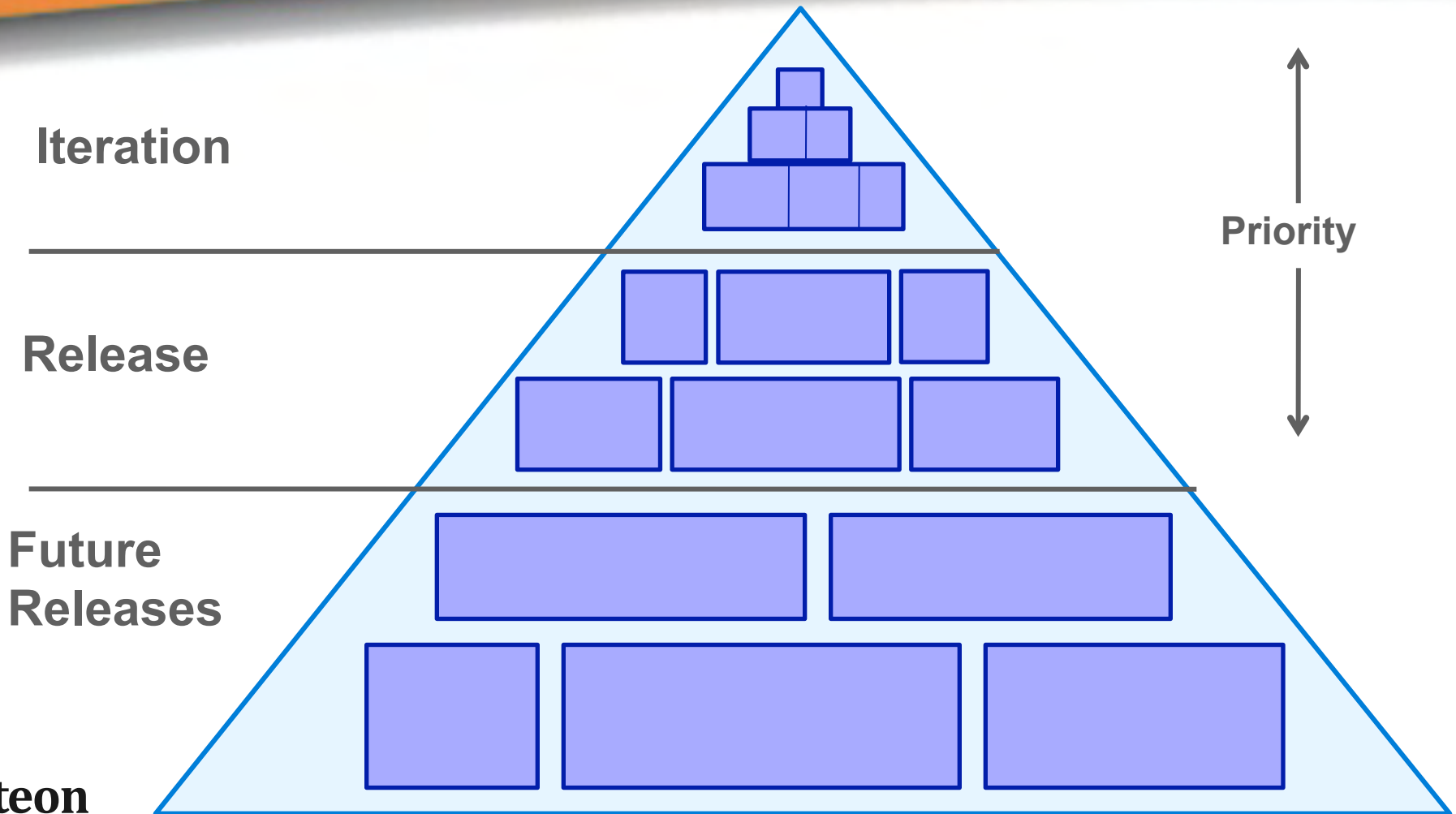
## Check Price

*In order to answer the customer's questions about product price the Cashier checks the price of a product*



# Story Writing

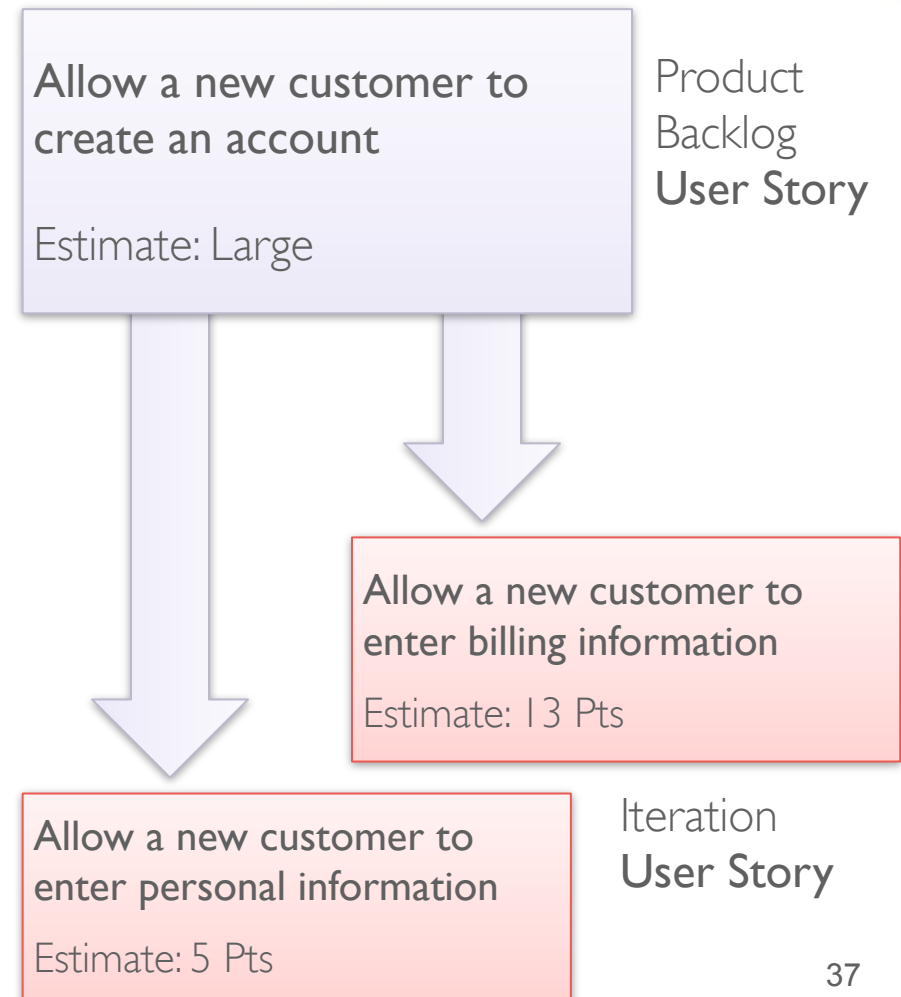
# The product backlog iceberg



# Sizes of User Stories

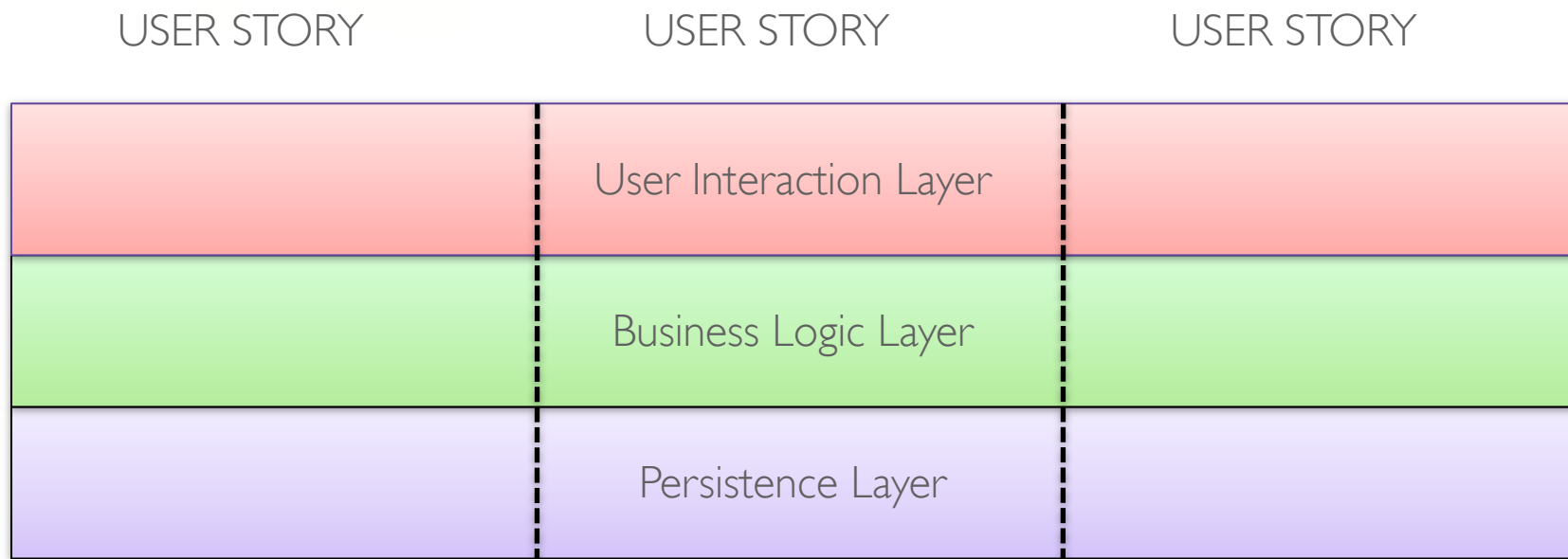
## Key Characteristics

- 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”





# Unit of Value



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



# Details as Acceptance Criteria

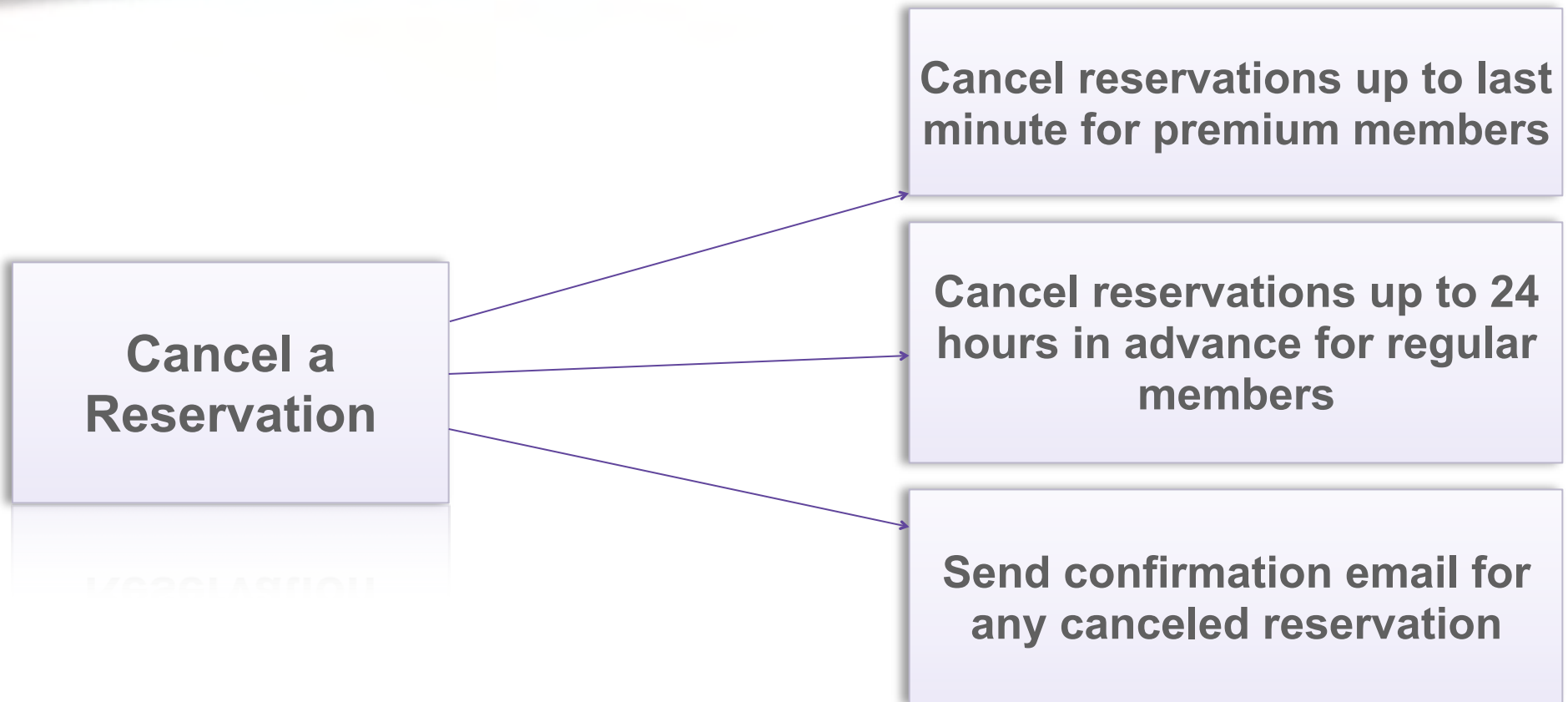
## Cancel a Reservation

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

These are essentially tests

- 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

# Details added in smaller stories



# Attributes of Good Stories

- I ndependent (Dependencies reduce agility)
- N egotiable (Negotiation breeds collaboration)
- V aluable (Valuable to the product owner)
- E stimatable (Stories are planning tools)
- S ized appropriately (predictably delivered)
- T estable (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](http://www.doctoragile.com)

Expanded Version : contact us : [asidky@santeon.com](mailto: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

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