Managing Software Needs (Acquisition and Development)

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Assignment 4: Software Requirement

- Team project: 3 people
- Clearly LABEL architectural statement (underline/bold)
- Next week: Report Part 1
  - Team members
  - Informal Software Need Description
  - Concept
    - 1 page summary
    - A tweet (under 140 characters)
- Two weeks: Report Part 2
  - Personas : define & analyze behavior
  - Scenarios
  - User Stories
- 15 minutes to start on this
- http://wiki.directproject.org/User_Stories

The following slides are adapted from
http://www.trizetto.com/HCC2014/

TriZetto® 2014
HEALTHCARE CONFERENCE
Competing to Win in a Post-Reform World

CareAdvance Provider: Agile Development Collaboration

Janice Mead, RN Sr. Product Manager
CareAdvance Provider Product Owner

MAY 18 – 21, 2014
JW Marriott San Antonio Hill Country

TRIZETTO

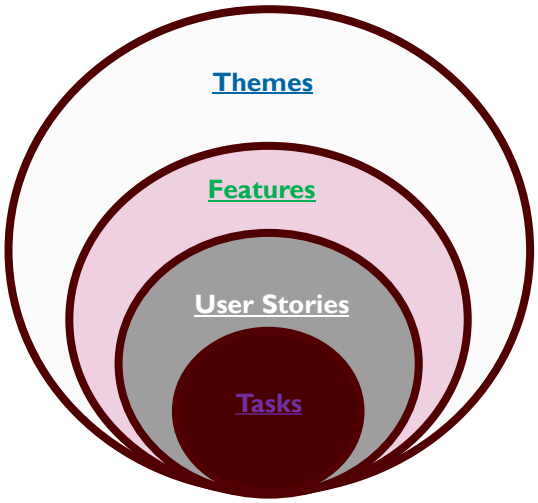
CareAdvance Enterprise Agile Roles

- Product Manager
- Product Owner
- Scrum Master
- Scrum Team

Product Backlog Hierarchy

- Theme
  - An idea that spans multiple Scrum Teams and Sprints
  - May fit into a Release
  - No detail
- Feature
  - An idea that may span multiple Scrum Teams and Sprints
  - Usually fits into a Release
  - Some detail
- User Story (a.k.a. Product Backlog Item)
  - Work item for a Sprint for a Scrum Team
  - Complete testable piece of work
  - Very detailed
- Task
  - Chunk of work for team members
  - When all tasks are completed and reviewed, the User Story is done

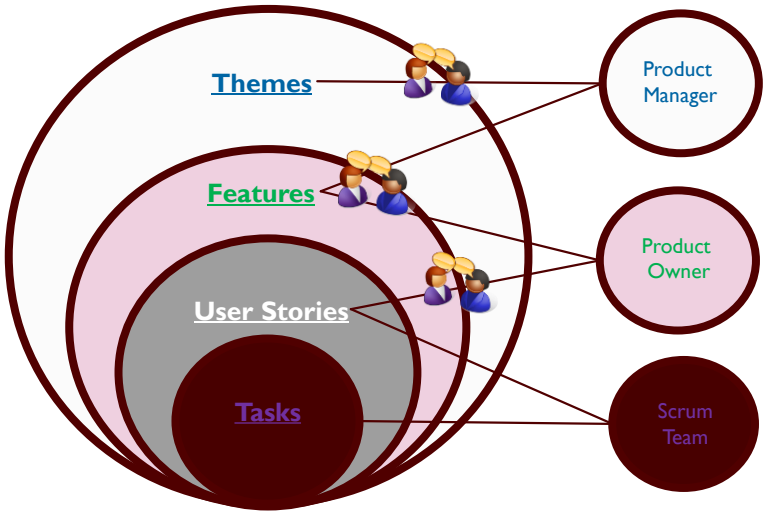
Product Roadmap Hierarchy



CAE Agile Roles

- Product Manager
  - Defines Roadmap - High Level Themes and Features
  - Presents business need and value to the Product Owners
- Product Owner
  - Writes User Stories for Features
  - Prioritizes the User Stories in the Backlog
  - Grooms the User Stories with the Scrum Team
- Scrum Team Members
  - Grooms and Sizes the User Stories
  - Commits to doing the work
- Scrum Master
  - Protects the team
  - Removes impediments to completing work

Product Roadmap Ownership



CAE Scrum Teams

- Clinical CareAdvance (CCA)
  - Multiple Scrum Teams- logical areas of responsibility
    - Case/Disease Management
    - Utilization Management
    - Application Workflow
    - Constituents
    - Content
    - Rules
    - Common Application Components
    - Infrastructure
    - Development Operations and Architecture
- Each Scrum Team is composed of members who have the roles we just discussed
  - 1 Product Manager (usually PM of more than one product)
  - 1 Product Owner
  - 1 Scrum Master
  - Team of Developers and Quality Analysts

CAE Scrum Teams

- CareAdvance Provider
  - One Team responsible for the Product
- Value Based Benefits
  - One Team responsible for the Product
- Each Scrum Team has its own backlog
  - Product Owners identify inter-team dependencies
  - Product Owners set the priority for their team's backlog
  - Team and PO groom User Stories to remove ambiguity and size the effort
  - Team makes the Release and Sprint commitments

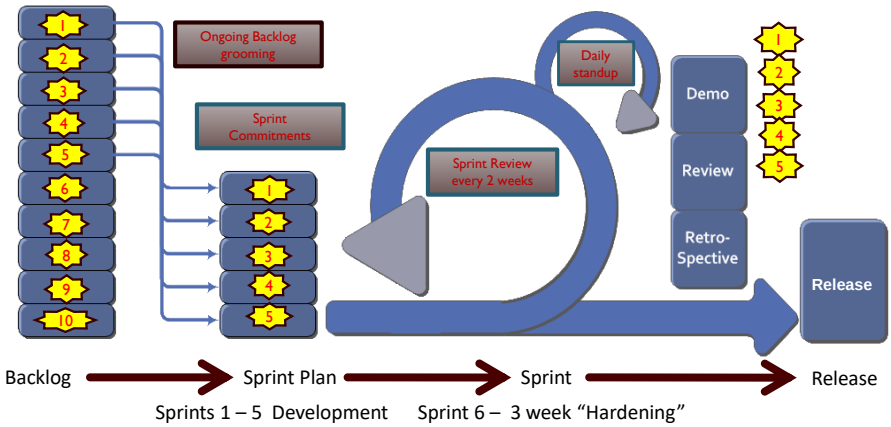
Client Collaboration

[Health care provider collaborating with engineers]

When

Who

Agile Development

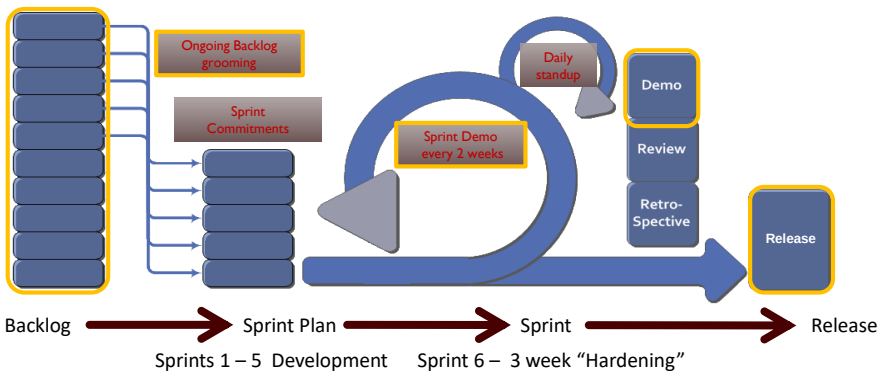


- Adding Features and grooming the backlog is an ongoing activity.
- User Stories are worked on in backlog priority order during Sprints.
- "Done" work is shown to stakeholders at the end of each Sprint.

Client Opportunities for Input

- Theme and Features – Think Breadth
  - What is the business need?
  - What problem are you trying to solve?
  - What is your high level workflow?
- User Stories – Think Depth
  - What does the user need to do and why?
  - What is acceptable functionality?
- Sprint Demo
  - How does what we built so far look?
  - Are we headed in the right direction?

Opportunity for Client (=health care providers) Influence



- Backlog Grooming
  - Product Manager Defines Themes and Features
  - Product Owner adds User Stories to the Backlog; Prioritizes
  - Team Grooming and Commitments
  - Daily Stand-up
- Sprint Demo
- Release Review

End-of-Sprint Demos

- Teams show off completed work
  - Not a technical review
  - Only pieces of the full picture
- Stakeholders are encouraged to attend
- Opportunity to give feedback
  - Fail fast to allow time to respond
- Work shown may or may not be in the release
  - Complex feature work may stretch into the next release

Organizing Information Technology Services

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Key Attributes High-Performing IT Staff

- They execute well
- They are good consultants
- They provide world-class support
- They stay current in their field of expertise

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Benefits
Centralization of IT Services

- Enforcement of hardware and software standards
- Efficient administration of resources
- Better staffing
- Easier training
- Effective planning of shared systems
- Easier strategic IT planning
- Tighter control by senior management

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Benefits
Decentralization of IT Services

- Better fit of IT to business needs
- Quick response time
- Encouragement of end user development of applications
- Innovative use of information systems

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Departmental Attributes

- Agility
  - The ability to form and disband teams quickly as staff members move from project to project
  - Organizational structures and reporting relationships must be flexible;
  - During a project. the project manager is the [temporary] boss of the project team members; team members may have several bosses during the course of a year if they work on different projects
  - Organized around projects, not functions

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Departmental Attributes

- Innovativeness
  - Reward systems that encourage new ideas and successful implementation of innovative applications
  - Create dedicated research and development groups
  - Permit staff members to take sabbaticals or accept internships with other departments in the organization in an effort to expand IT members' awareness of organizational operations, cultures, and issues

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Outsourcing

- **In-house**: organizations hire their own IT staff members and form their own IT department
- **Outsource**: organizations ask a third party to provide the IT staff members and be responsible for the management of IT
  - Organizations may not have staff members will the skills, time, or resources to take on new projects or provide sufficient service
  - Organizations may outsource held desk services or website development so that internal IT staff can focus on implementing or supporting applications
  - May enable organizations to better control costs
  - May serve as "rescue mission" if IT has been mismanaged

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Key Areas Evaluating IT Effectiveness

- Governance
  - Are IT strategies aligned with the overall strategic goals?
- Budget development and resource allocation
  - **Benchmark**: Are we spending too much or too little on IT?
- System acquisition and system implementation
- IT service levels
  - What is the quality of the every day service being delivered?
  - Infrastructure, day-to-day support, consultation

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Infrastructure Metrics
Evaluating IT Effectiveness

- **Reliability**: percentage of time that systems have unscheduled downtime
- **Response time:** how quickly an application moves from one screen to the next
- **Resiliency**: how quickly a system can recover after it goes down
- **Software bugs**: the number of bugs detected in an application per line of program code or hour of use

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Core IT Processes
For an Effective IT Department

- Human capital management
- Platform management
- Relationship management
- Strategic planning
- Financial management
- Value innovation
- Solutions delivery
- Services provisioning

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Presentation: Telemedicine

- Peer Review
- How well was the technology described in the presentation ?
- How well did you understand the three take aways for hospital managers?
- How well did the presentation discuss the relevance and impact of the technology on health care?
  - Great
  - Good
  - Reasonable
  - Bad

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Good interopability reports

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Next week

- Read Chapter 7
- Quiz 6
- Assignment 5 goes out
- Please finish the slides from today by end of class tomorrow.
- Assignment 4 Due

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AI in Health Care
AI and machine learning: What cuts hype from reality?

- Each group will read
  - https://www.healthcareitnews.com/projects/ai-and-machine-learning
  - one assigned reading
  - and one you pick (EXCEPT the assigned readings)
- Prepare a group presentation for next class
  - The main idea from the assigned article
  - Three takeaways for healthcare managers form the assigned reading
  - One takeaway from each of the individual readings in the group

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Health IT News

- https://www.healthcareitnews.com/projects/ai-and-machine-learning
- Group 1:cios-guide-dashboard-ai
- Group 2: ai-table-stakes-clean-and-well-governed-data
- Group 3: machine-learning-system-saves-case-managers-1327-hours-year
- Group 4: how-grady-health-system-used-ai-reduce-preventable-readmissions