

Agile software development

Bertrand Meyer

Part E: agile artifacts

From user stories to burndown charts



User story



Source: Cohn

Defines an atom of functionality

See lecture on practices

Story card

XP

Source: Jeffries

From the original C3 project:

Customer Story and Task Card		BLW Development / COLA	
DATE: 3/19/98	TYPE OF ACTIVITY: NEW: <input checked="" type="checkbox"/> FIX: <input type="checkbox"/> ENHANCE: <input type="checkbox"/> FUNC. TEST: <input type="checkbox"/>		
STORY NUMBER: 1275 1275	PRIORITY: USER: <input type="checkbox"/> TECH: <input type="checkbox"/>		
PRIOR REFERENCE: <input type="text"/>	RISK: <input type="text"/> TECH ESTIMATE: <input type="text"/>		
TASK DESCRIPTION: SPLIT COLA: When the COLA rate chgs. in the middle of the BLW Pay Period, we will want to pay the 1 ST week of the pay period at the OLD COLA rate and the 2 ND week of the Pay Period at the NEW COLA rate. Should occur "automatically" based on system design.			
NOTES: For the OT, we will run a m/frame program that will pay or calc the COLA on the 2 ND week of OT. The plant currently retransmits the hours data for the 2 ND week exclusively so that we can calc COLA. This will come into the Model as a "2144" COLA			
TASK TRACKING: Gross Pay Adjustment. Create RM Boundary and Place in DEEntExcess COLA			
Date	Status	To Do	Comments

Task card

XP

Source: Jeffries

From the original C3 project:

Engineering Task Card

DATE: 3/17/98 **BIN** Small talk / Future
Based on Conversation w/ REB:AMA **NEW**

STORY NUMBER: X923 SOFTWARE ENGINEER: _____ TASK ESTIMATE: _____

TASK DESCRIPTION:
Composite Bin - Regular Base Needs to Be Displayed on GUI. We have the hidden bin for Regular Base (Lost Time) to display NOT the auto gen bin but the BIN that composites the Auto Pay: the Lost Time. There is

SOFTWARE ENGINEER'S NOTES:
a separate composite bin started that needs to be completed??

TASK TRACKING:

Date	Done	To Do	Comments

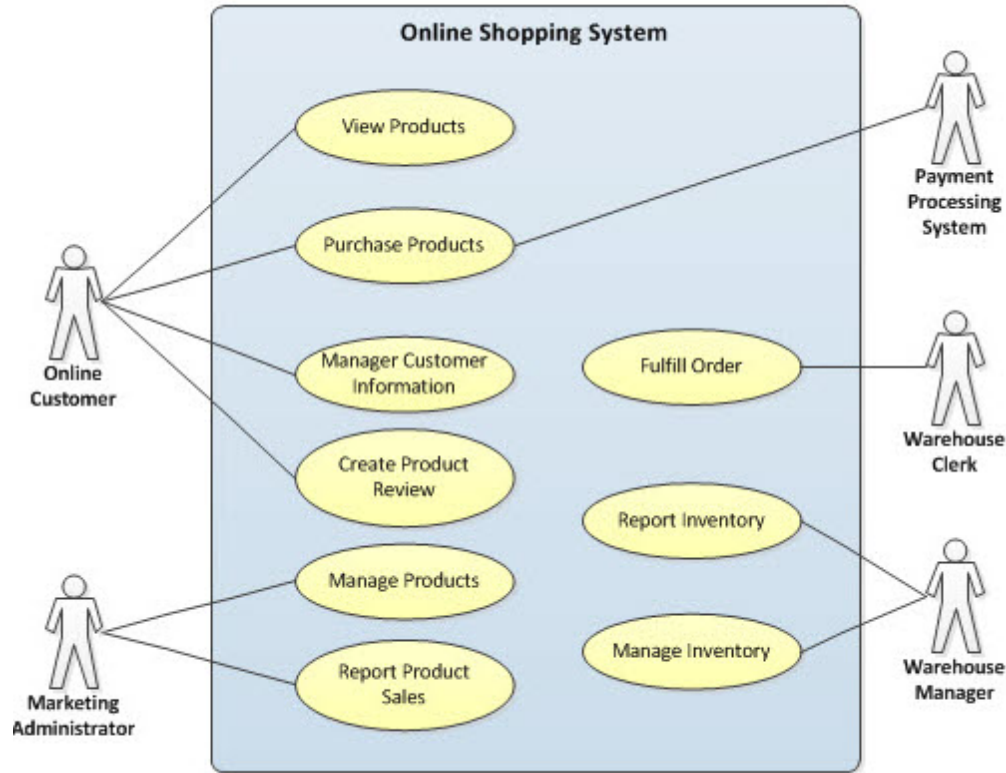
Use case



Describes how to achieve single business goal or task through the interactions between external actors and system

One of the UML diagram types

Use case example



*Diagram source: T. Lockman
(Wikimedia Commons)*

Use cases vs user stories

After Cockburn

User story:

- Very simple
- Written by customer
- Incomplete, possibly inaccurate
- Does not handle exceptional cases
- Starting point for additional discussions with customer

“Think of a user story as a use case at 2 bits of precision”

Use case:

- More complex
- Written by developer in cooperation with customer
- Attempts to be complete, accurate
- Should handle all possible cases
- Intended to answer any developer questions about customer requirements without further interaction with customer



- Maintained throughout project
- Property of product owner
- Open and editable by anyone
- Contains backlog items: broad descriptions of all potential features, prioritized by business value
- Includes estimates of business value
- Includes estimates of development effort, set by team

Visualized in “task board” (see next)

Task board, story board

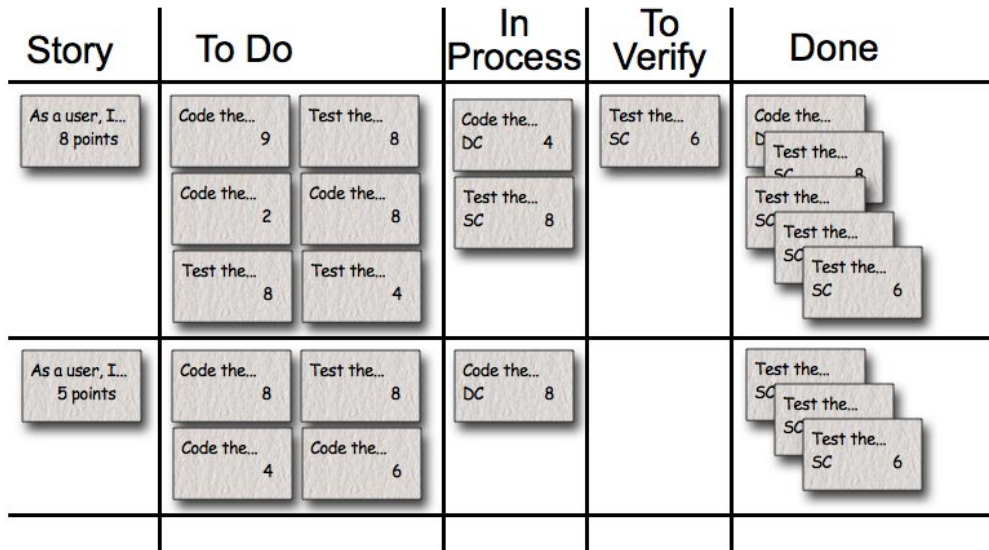
Scrum

Source: Cohn, Anand

Used to see and change the state of the tasks of the current sprint: “to do”, “in progress”, “done”.

Benefits:

- Transparency
- Collaboration
- Prioritization
- Focus
- Self-organization
- Empiricism
- “Humility”
- Morale



Example source: Mountain Goat Software

Story board

Source: Saunders

BACKLOG
NEXT WEEK
UNSCHEDULED

THIS WEEK
Rich
Chris
Steve
Gareth
Duncan
Unassigned
Gareth
Duncan
Steve
Chris

IN PROGRESS
Steve
Rich
Gareth
Chris

TESTING
Chris
Steve

DONE

WAITING FOR

CMS + EMAIL

Advice	Flows / 404	Requests
#1 (10 mins)	13	13
#2 (< 1 hr)	4	7
#3 (1-2 hrs)	0	2
T4 Site Manager		
Feature requests		
Open	15	
Total	35	

NOTES

Daily questions

1. What did you do yesterday?
2. What do you think is next?
3. Any problems?
4. Any new requests?
5. Any outstanding CMS?

Weekly review

1. Why is on CMS next?
2. Update project board.
3. Schedule work for next week.

Measure of progress in a project:

Number of items delivered

- Measured in tasks, user stories, backlog items...

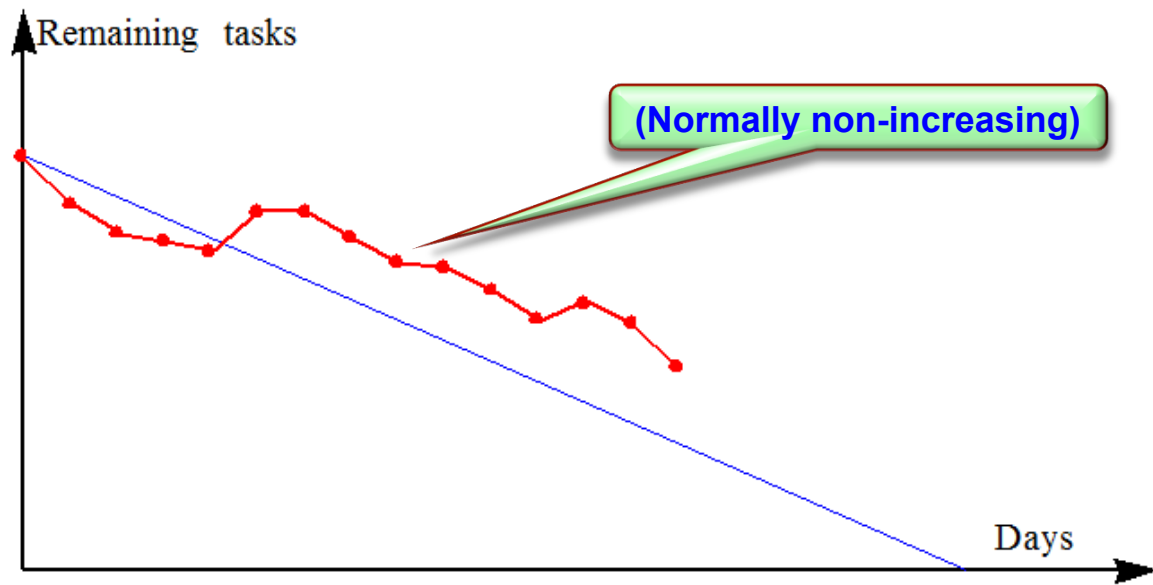
Burndown chart

Scrum



Publicly displayed chart, updated every day, showing, for the sprint backlog:

- Remaining work
- Progress





Single, open room
(See “ Informative workspace” principle)

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Part E: Artifacts

What we have seen:

Virtual and material tools
that directly support agile concepts