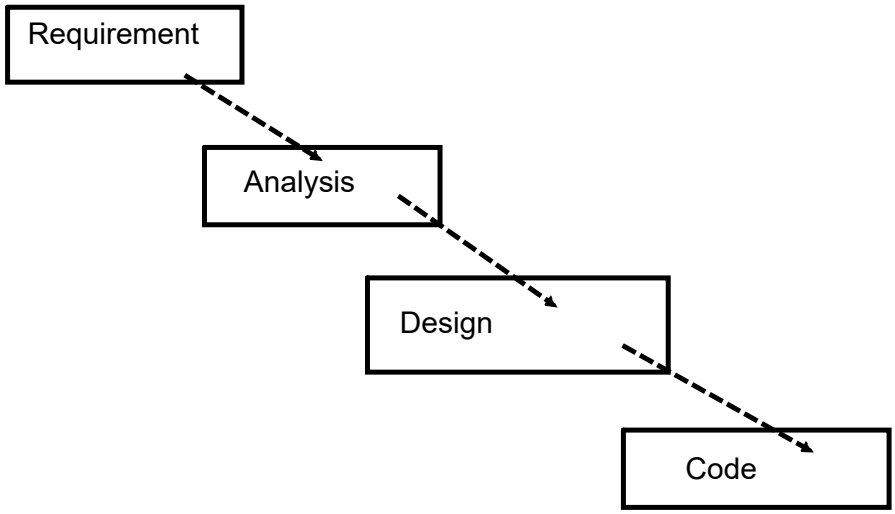
Agile development process :

#different way (industry tested)of executing software dev teams and projects

#smooth process - flexible

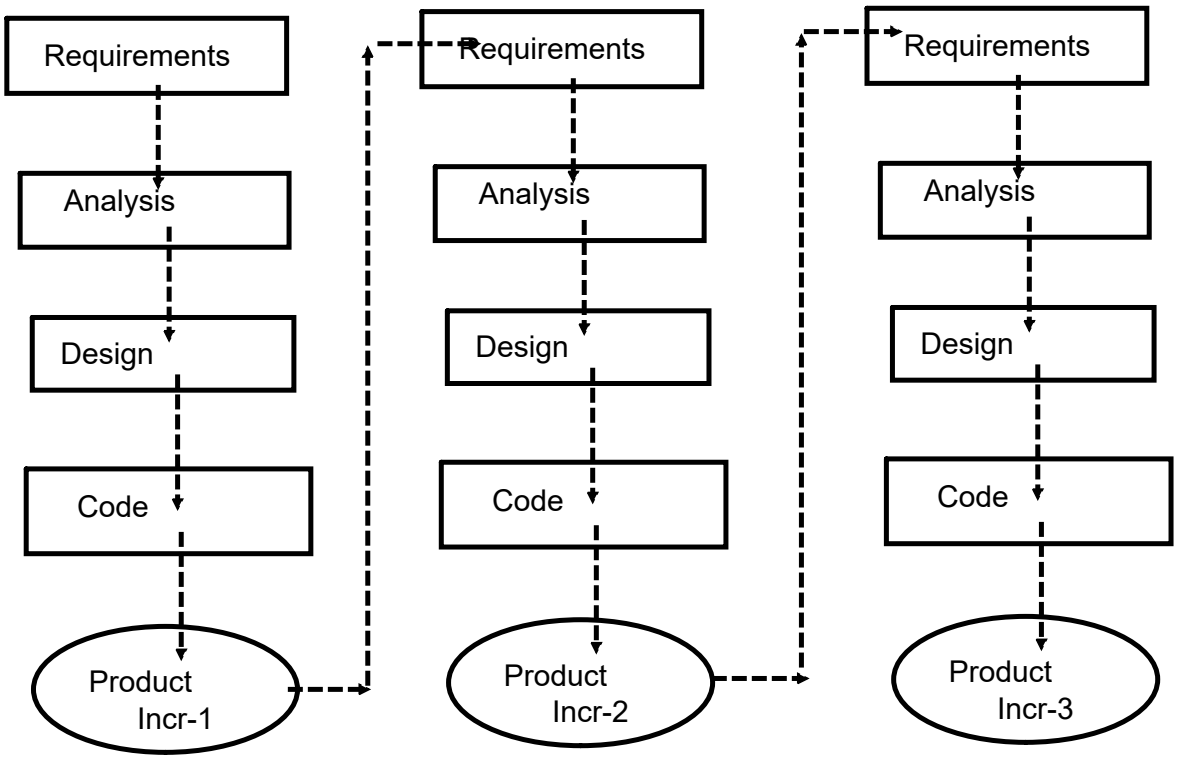
Waterfall Model :



#identify all req in beg (consider those req as final)

#not structured to accomodate new req.

Iterative Incremental Model



#begin with a set of priortized req

#provide a product

#Re-accumulate the requirement/feedback and follows the process again

Agile Development process

1. Iterative Incremental process
2. Time-boxed (encourage rapid and flexible response)

Specification : 2001

#Organisation of dev team

#accommodating changing req

#customer involvement

Guideline for agile frameworks(practices)

More importance shall be given to team organisation, their interaction,transparency rather than process or tools

#Focus shall be on working software rather than documentation (to gain customer trust)

#More importance shall be over Customer collaboration rather than negotiations

#more focus shall be on responding to change over following a specific a plan

Implementations of agile methods:

#Rational Unified Process

#Dynamic Systems Development Methods(DSDM)

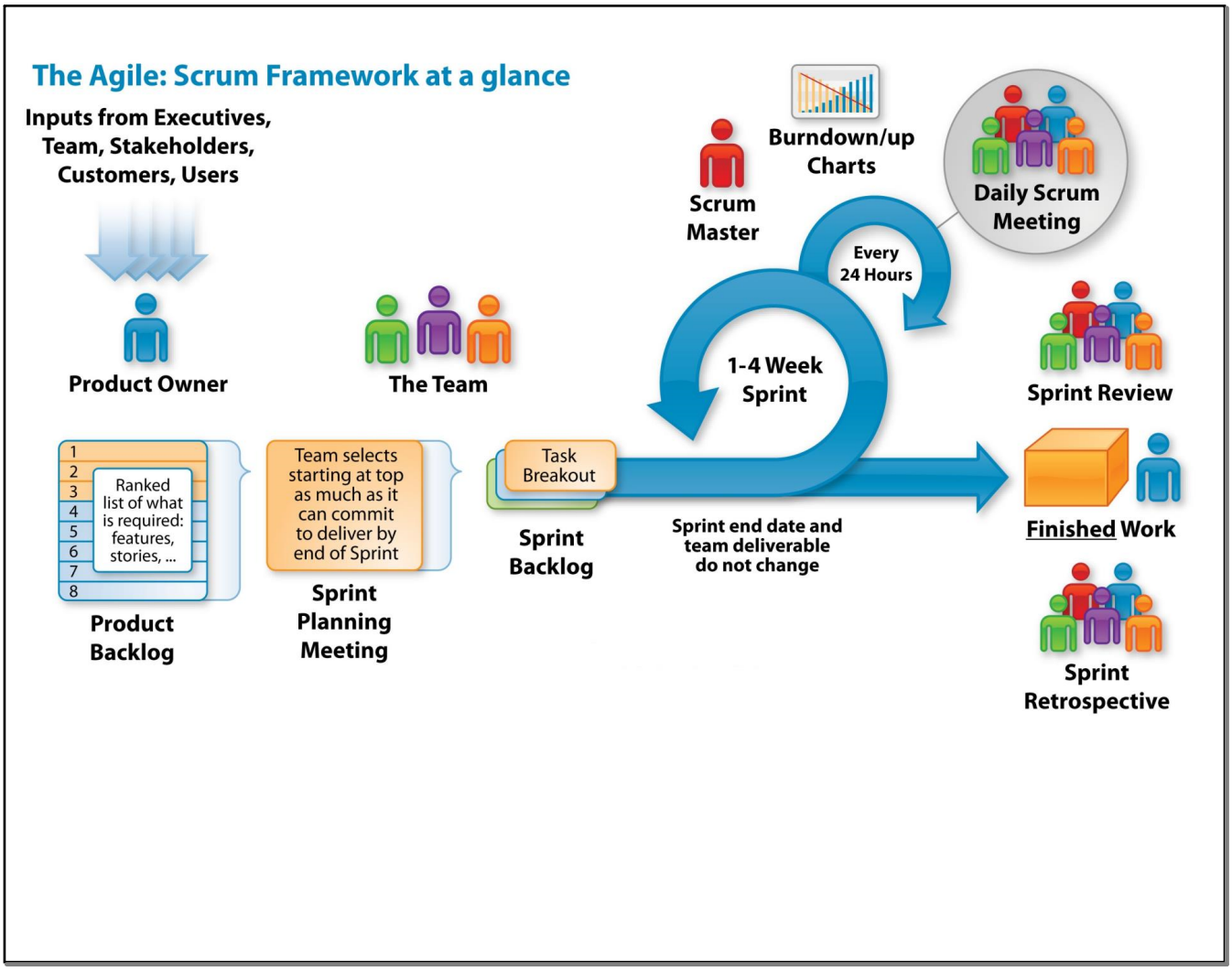
#Adaptive Software Development

==>Scrum

Ken Schwaber, Jeff Sutherland (complex projects)

#people can address complex adaptive problem

#at the same time keeping productivity and creativity at the highest level


The Agile: Scrum Framework at a glance
Inputs from Executives, Team, Stakeholders, Customers, Users
Product Owner
The Team
Scrum Master
Burndown/up Charts
Daily Scrum Meeting
Every 24 Hours
1-4 Week Sprint
Sprint Review
1
2
3
4
5
6
7
8
Ranked list of what is required: features, stories, ...
Product Backlog
Team selects starting at top as much as it can commit to deliver by end of Sprint
Sprint Planning Meeting
Task Breakout
Sprint Backlog
Sprint end date and team deliverable do not change
Finished Work
Sprint Retrospective

Events : (Activities)

Roles: (Team organization)

Artifacts : (documentation)

Events :

- The Sprint
- Sprint planning
- Daily Scrum meeting
- The Sprint Review
- The Sprint Retrospective

Sprint : Core of Scrum (Iterative incremental model)

time-boxed event of 1-4 weeks : during which a potentially releasable product increment is created

#involves sub events

Sprint Planning :

#time-boxed event: four hr for 2 week sprint

#scrum team member(part of next sprint) must be available

Output :

1. what needs to be done and what can be delivered
2. how it will be achieved

Input:

#Artifact (Product Backlog) (document)

#The latest(last) product increment

#Projected capacity of the team

#Past performance of the team

Daily Scrum Meeting:

Time-boxed event : 15 min (at same place same time)

#a quick explanation by each team members:

1. what was done prev day to achieve sprint goal

2.what will be done to-day to achieve sprint goal

3. what are limitation that prevents to achieve sprint goal

Sprint Review Meeting:

#time-boxed : 2 hrs for 2 week print

#presentation of increment

wide variety of attendees

#provide valuable input for next sprint planning meeting

Sprint Retrospective:

#time-boxed event: 1 hr for 2 week sprint

#Combine the learning from prev sprint

#analysing the team structure,process, tools

Team Organization: (Roles)

#Scrum Master

#Product Owner

#Team (Sprint team)

Scrum Master :

#Keeper of scrum process:

responsible for:

1. making the process run smoothly
2. removing the obstacle
3. organizing and facilitating the important meetings

Product Owner:

#single point interaction / controllers of the product

#primary / clubbed up requirement of complete product

#status of product

#not involved in process

Team :

functional (cross-functional)

Composition : anyone who is relevant or appropriate for the project:

Scrum suggestive : 5-10

Suggestive changes in composition in each sprint

Scrum Artifacts (Documents)

- Product Backlog
- Sprint Backlog
- Burn-down charts
- Increment

Product Backlog:

#ordered list (priortized) of features that are needed as part of end product

#list all features,functions,req,enhancements, bug fixes...

#evolving artifact . constantly changes to incorporate what is required to make it effective

#managed by Product Owner

Sprint Backlog:

#Sprint Backlog is a set of Product Backlog items selected for current sprint

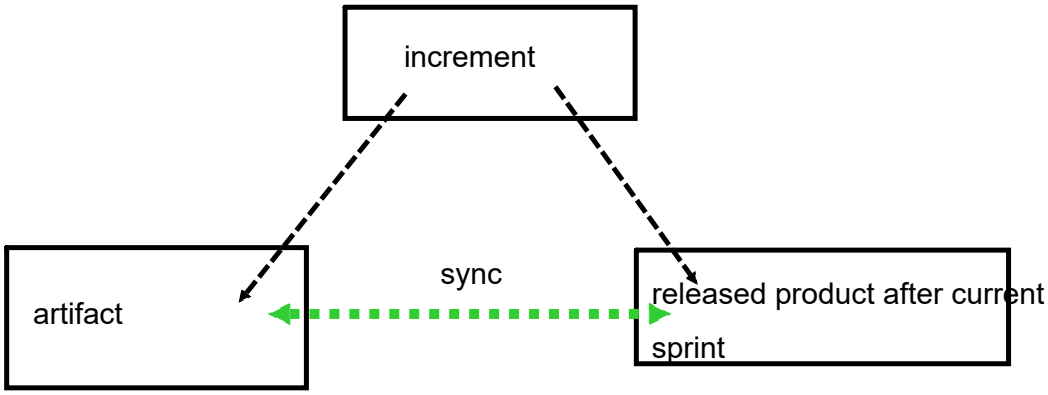
#plan for delivering the product increment (working artifact)

#Real-time picture of work.

#Sprint Team which updates the sprint backlog

Increment :

Team to finalize / agreed upon the increment status



#sum of all Product Backlog items completed during the recent sprint, combined with increments of all prev increment

#Target : Increment at certain point of time shall sync with Product Backlog

Sprint Burn-down chart:

#sprint tracking artifact

#total work remained in Spring Backlog to be done (at any point of time)

#useful artifact for daily scrum meeting (monitor the progress)

User-Stories: Peculiar way represent the expected requirements:

#expectation/requirements of user must be thoroughly/accurately and appropriately be k own to dev team.

#User-stories: describing req from user perspective (both Product Backlog/Sprint backlog contains req as user-stories) , team always keeps in mind the final expectation from customer

User-Stories (standard structure)

As a <Type of User>

I want <To perform some task> (high level req)

So that <I can achieve some goal/benefit>(thought process behind the feature)

Eg:

As a "Customer"

I want to "withdraw cash from an ATM"

So that "I don't have to wait in line a the bank"

#Generally user-stories has acceptance criteria:

Acceptance Criteria 1:

Given the

account is valid

card is valid

atm dispensor contains cash