# QA/GAME TESTING LECTURE 2

GAME2338-001

By Chandra Abrahams

ALAMO COLLEGES
NORTHWEST VISTA COLLEGE

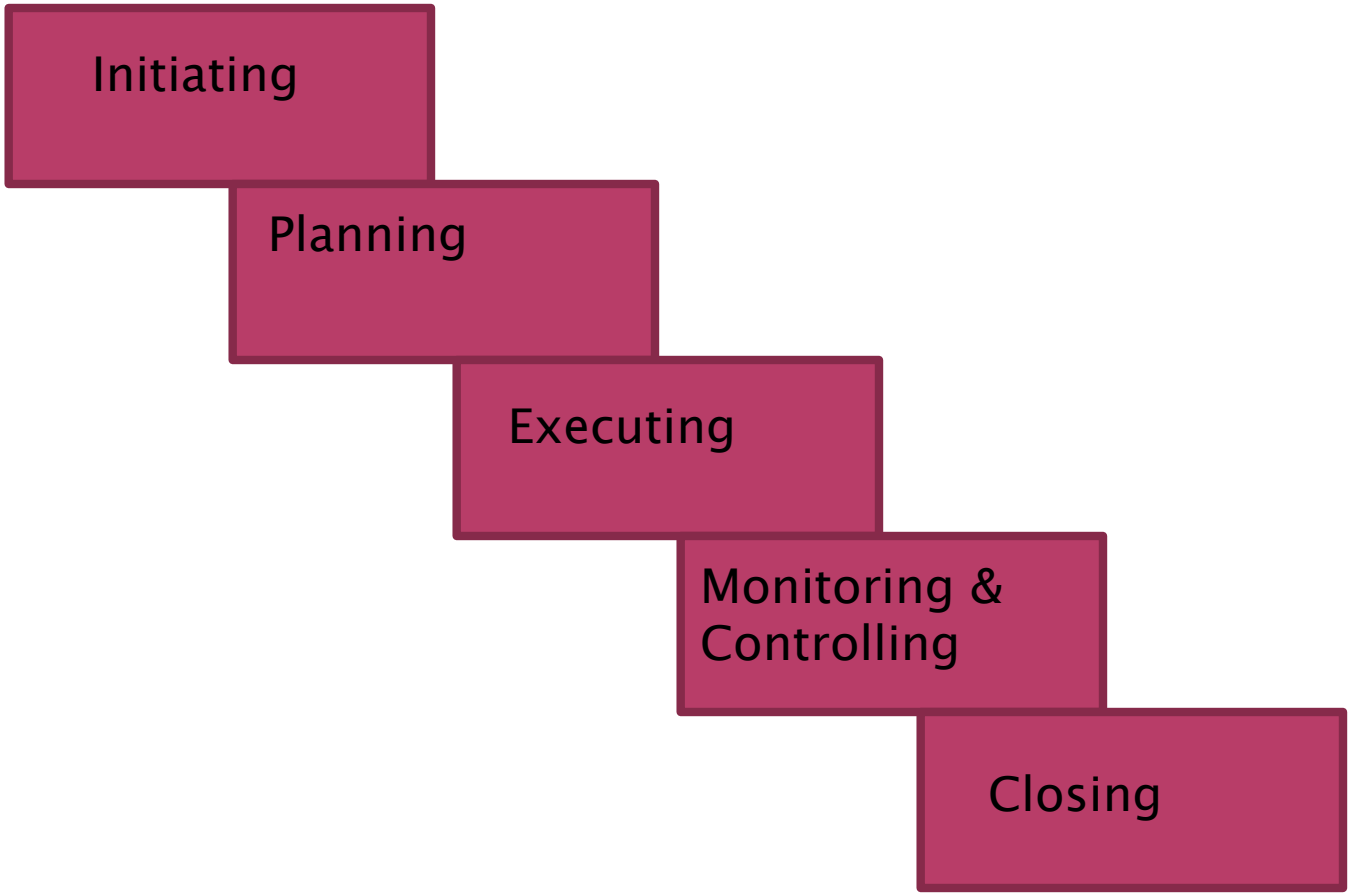
# REVIEW

- What is Quality?
- What is difference between QA and QC?
- Name 5 of the 11 Quality Factors
- What are the 5 Perspectives of Quality?

# IN YOUR OWN WORDS. . .

- What is project? Project Management?
- What is a software development lifecycle?

# PROJECT MANAGEMENT PROCESS GROUPS



# PROJECT MANAGEMENT KNOWLEDGE AREAS

- Integration
- Scope
- Time
- Cost
- Quality
- Human Resource
- Communications
- Risk
- Procurement

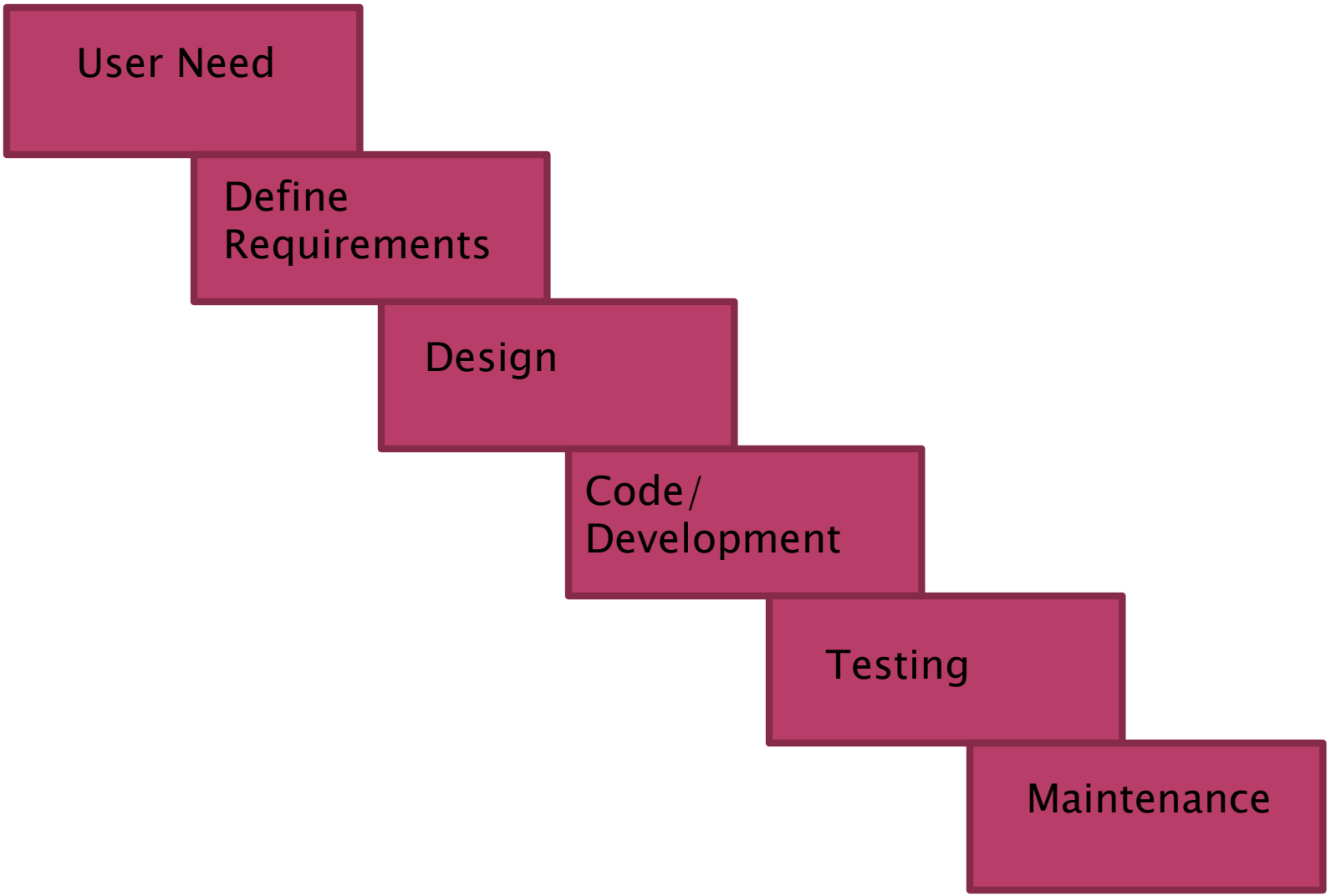
# Define Software Development Lifecycle (SDLC)

- A software development process structure that is used to develop a software product. There are several different types of SDLC models.

# Common SDLC Models

- Waterfall
- Prototype
- Spiral/Phased
- Agile/Scrum

# WATERFALL


User Need
Define Requirements
Design
Code/ Development
Testing
Maintenance

# WATERFALL

- The most traditional of all the SDLC models

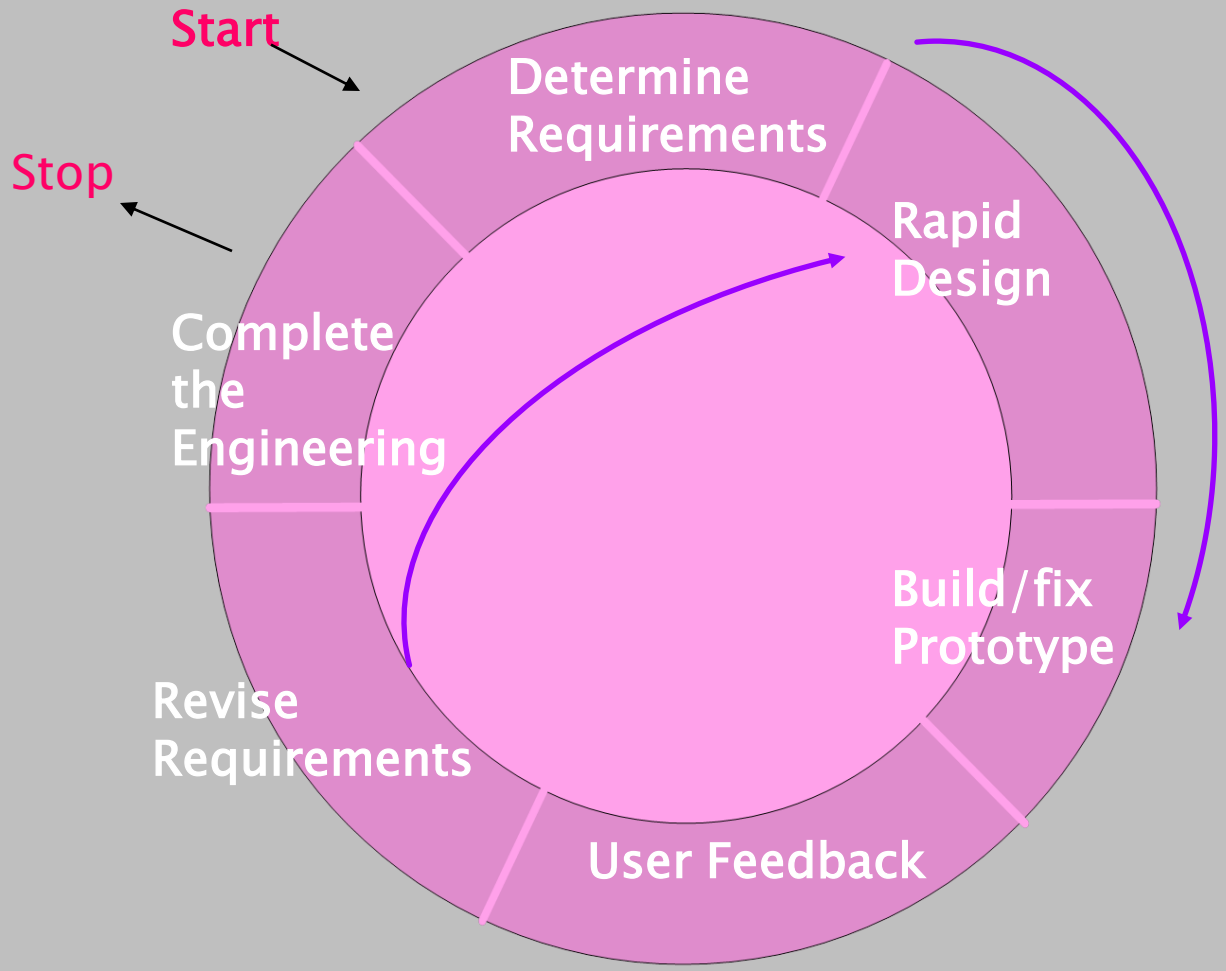
Strengths:

- Easy to follow
- Pretty well organized

Weaknesses:

- Limited user involvement with actual product

# Prototyping Model



# PROTOTYPE

- Provides "look and feel" of system early in the development process

Strengths:

- Finds undefined user requirements
- Provide user and developer interaction

Weaknesses:

- Produced quickly
- Poorly documented
- Poorly managed in some cases

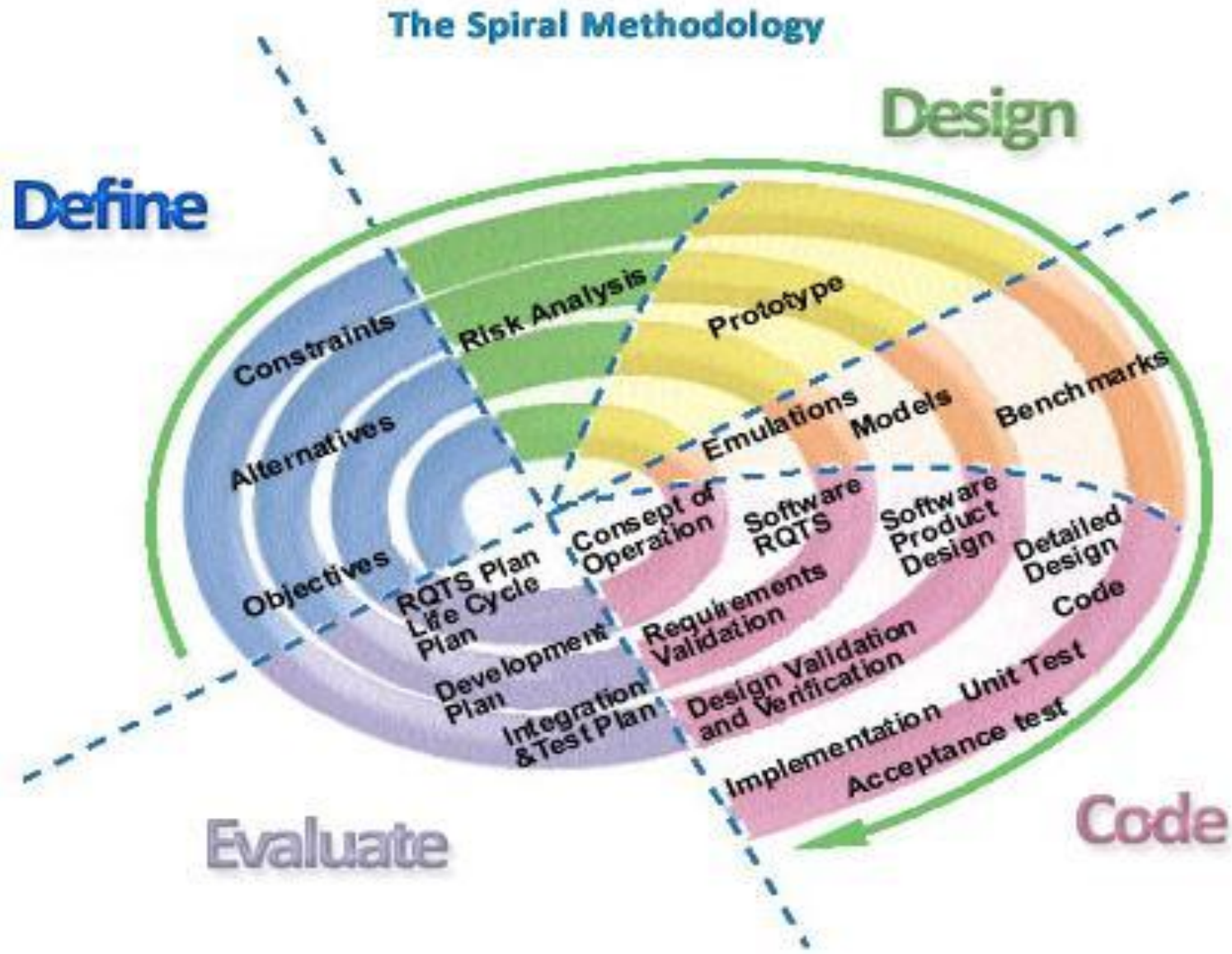



Diagram by Biko Technologies

# SPIRAL/PHASED

- A combination of prototype and waterfall model, usually used on large complex projects

Strengths:

- Early detection of major design defects
- Provide user and developer interaction to maintain good expectations

Weaknesses:

- Can continue indefinitely
- Cost is high
- Time between prototypes may not be sufficient

# AGILE

- Sped up development process that can bypass more of phase in a lifecycle, less formal, reduced scope

Strengths:

- Reduced development time
- Quick initial reviews occur

Weaknesses:

- Dependent on a strong team
- Usually a modular or time critical systems

# AGILE MANIFESTO

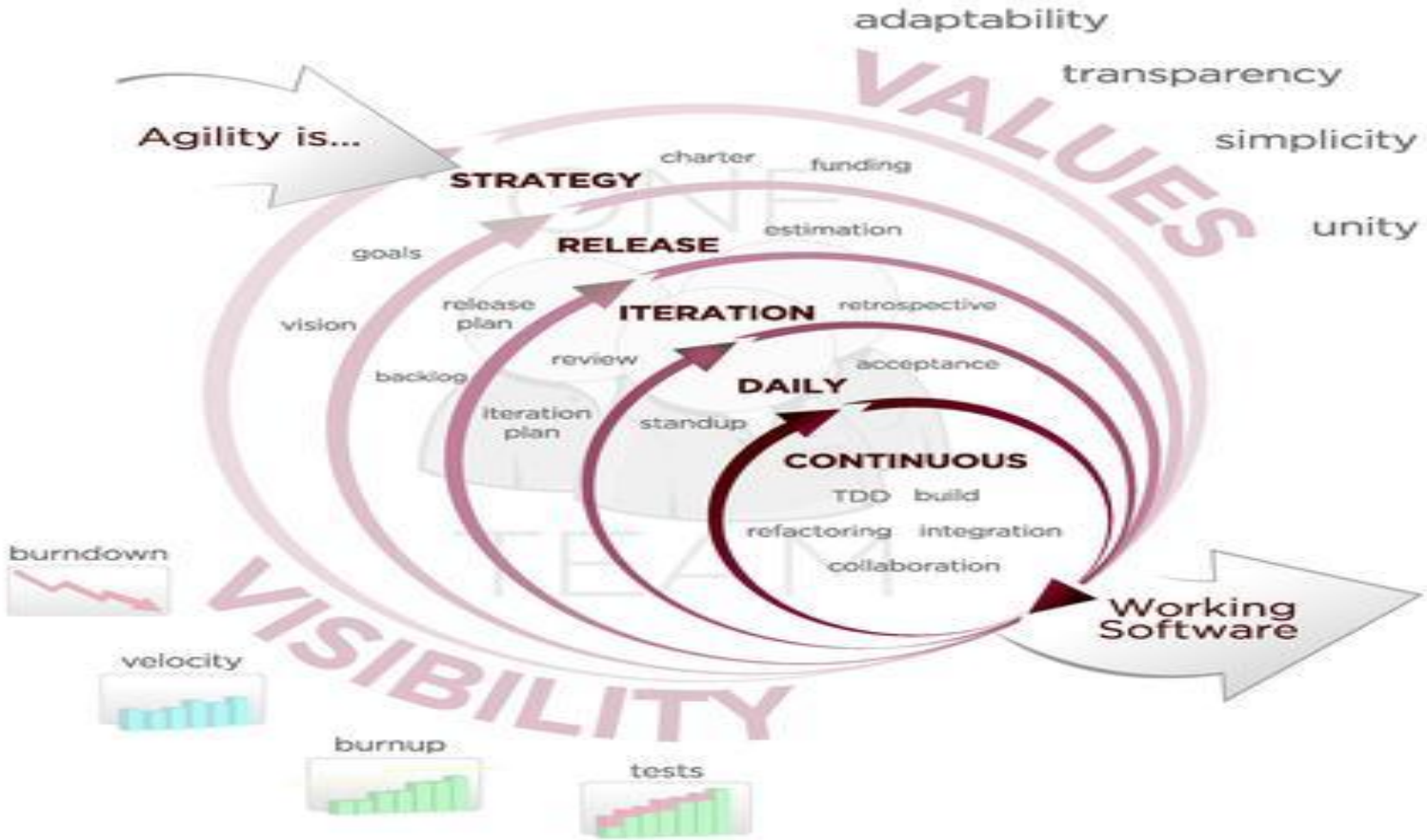
**Manifesto for Agile Software Development**
We are uncovering better ways of developing software by doing it and helping others do it.

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.

http://agilemanifesto.org/

# AGILE DEVELOPMENT




# ACCELERATE DELIVERY

VERSIONONE
Simplifying Software Delivery

Diagram By VersionOne

# SCRUM

Scrum is an **Agile framework** for completing complex projects. Scrum originally was formalized for software development projects, but it works well for any complex, innovative scope of work. The possibilities are endless. The Scrum framework is deceptively simple.

See more at: https://www.scrumalliance.org/why-scrum#sthash.Upyf7PIH.dpuf

Strengths:

- Simple
- Entire team is involved in decisions

Weaknesses:

- Dependent on a strong team
- Endless development

# Scrum Video

Watch Intro to Scrum Video:

http://www.open.collab.net/nonav/community/swp/training/IntroToScrum/Intro_to_scrum.htm

From www.collab.net

# WHEN DOES TESTING HAPPEN?

- Waterfall
  - All testing occurs during define period
- Prototype
  - Testing occurs prior to each prototype being released or sometimes just before final release
- Spiral/Phased
  - Testing occurs at the end of each spiral or phase (monthly, quarterly)
- Agile/Scrum
  - Testing occurs often (daily or weekly)

# GAME LIFECYCLE

- Games are usually built using a combination of the prototype and phased models
- According to the Game Development Essentials book a typical game lifecycle consists of :
  - Design
  - Prototype
  - Alpha
  - Beta
  - Gold

# GAME LIFECYCLE PHASES

- Prototype
  - Rough draft, used to get a publishing deal
- Alpha
  - First major milestone
  - Includes a full playthrough (Beginning to End)
- Beta
  - Game is virtually finished
  - Closed /Open Beta testing
- Gold
  - Ready for the market

# THE TESTING PROCESS

# DEFINE TEST OBJECTIVE

- Organizing a test team
- Determining what needs to be tested or what requirements need to be met (Quality)
  - Testing Strategy

# THE TEST TEAM

- QA Manager
  - Interface with project leaders
  - Make all major testing decisions
- Test Lead
  - Divide up work load among testers
  - Multiple Test Leads may report to QA Manager
- Tester
  - Test case writing and execution

# DEVELOP TEST PLAN

- A document that lays out the plan for testing the system, includes the what, when, location, and how
- Test assumptions or constraints
- Breakdown of testing functions

# DEVELOP TEST CASES

- A test case also known as a test procedure is how a test will be conducted.
- Test Cases include:
  - a test condition - what is being validated
  - an expect result - the desired outcome
  - test data, if needed

# EXECUTE TESTS

- Running each test, recording the actual results of the test (Pass/Fail)

# REPORT TEST RESULTS

- A formal record of the results of each executed test  and a list of defects found during testing
- Test report sometimes includes a recommendation from the test team on whether to move forward

# Game Testing Videos

- http://www.youtube.com/watch?v=H0sgH3maxlU
- http://www.youtube.com/watch?v=ZMj_YjKmp98&feature=related

# SKILLS TESTERS NEED

- Written and Oral Communication
- Listening
- Eye for Detail
- Interviewing
- Negotiation and Complaint resolution
- Good Project Relationships

# FEEDBACK???

# REFERENCES


- Game Development Essentials: Game QA & Testing (Luis Levy & Jeannie Novak)
- 2006 CSTE Common Book of Knowledge (Quality Assurance Institute)